



Assessment of Thyroglossal Duct Cyst by Ultrasound

Rabee Hajjar

Dept. of Diagnostic Radiology- Faculty of Medicine

Supervised by:: Dr. Aiman Bitar

The purpose of this study is to determine the sonographic manifestations of uncomplicated Thyroglossal Duct Cysts and using sonography as an adjunctive diagnosing tool prior to surgery.

25 patients, clinically diagnosed to have thyroglossal duct cysts with no clinical evidence of infection, thyroid cancer, or prior thyroid surgery, have been studied in Head and Neck department in Al Al Mowassat university hospital in Damascus, from 1/6/2004 to 1/6/2005. Patients were examined with linear probe 7.5 mega hertz in decubitus position with a pillow under a hyper-flexed neck. The study concentrated on the position of the lesion (relation to the hyoid bone and the med-line), its sonographic characteristics, wall thickness, and thyroid state.

The study revealed that 72 % of Thyroglossal Duct Cysts were on the med-line and 92 % were at or below the level of the hyoid bone. Also, it revealed that 40 % of Thyroglossal Duct Cysts were anechoic with posterior enhancement, whereas 60 % were Hypo, Iso, hyperechoic or heterogenous. 60 % were thin-walled, whereas 40% were thick-walled. 20% were associated with multinodular hyperplasia in the thyroid gland.

On sonograms, uncomplicated Thyroglossal Duct Cysts are not a simple cyst in all cases, but have a complex pattern ranging from typical anechoic to pseudo-solid appearance.

Key Words:

- Thyroglossal Duct Cysts
- Ultrasonography

FS FNA

%19FS FNA

.%12FNA

FS FNA %5,3 FS (... FNA,FS,)

%4

.4/1

8- 13 50< ,%40 40< .%18,75

6 %34

19 .%45 "

31 4< 4-2,2 . %100

7 . %25 20 ,%13

: ,%7 ,%6

+ ,%52 +

,%18

.%17

Comparison of the results of malignancy in the treatment of solitary thyroid nodule.

Ahmad Abu Hamdan

Dept. of Surgery- Faculty of Medicine

Supervised by :Prof.Fareez Sakr

The thyroid goiter is a subject of research of all physicians, precisely the surgeons . The researches include a fast glance for the thyroids with a retrograde study according to the sex, age, laboratory results and others(FNA,FS,...)and to compare it with the international results for the best way of the treatment method.

the research is made In Al Assad&Al Mowassat hospitals with 35 patients singular thyroid nodule 13-73 years old of the female & male sex between the year 98&2004 according to the file and discussion of the lab.& radiographic analyses& pathology with demonstration of the operations and comparison with the international.

the percentage of s.t.n. was found to be 1/4 between men & women. malignancy 18,75%. for males >40, 40%. For females >50, 34%. Hoarseness is the most common symptom with 45% malignancy. Nodule fixation 100% malignancy. Nodule size 2-4; >4cm-13; 20; 25% malignancy. Fine calcifications strongly suggests malignancy. Total thyroidectomy was done in 6%, Subtotal 7%, lobectomy + isthmectomy 52%, Total + subtotal 18%, No ductectomy or subtotal lobectomy 17%. As for FNA & FS it was found that: -without FNA + FS 19% reoperation. FNA only 12%. FS only 5%. FNA + FS 4%.

bilateral recurrent laryngeal nerve hurt - two cases
Unilateral 13 (8 malign. 6 reoperation). Superior larynx nerve 19.
esophageal 1. Hypoparathyroidism 3. Bleeding + hematoma 7 cases.

Key Words: goiter-malignancy-complications.

9

- - :

7.6 , %9.6
11.2 %14.4

9

9

7 2005/4/1 2004/4/1

500

(CAMRY)
)
(-
BMI =W(Kg)/L² ;
(m)
: BMI
: W
:L

Obesity & overweight in Children of 9 years old in Damascus

Ashraf Al Kaeed

Dept. of Pediatrics- Faculty of Medicine

Supervised by :Prof.Faisal Shaaban

the increasing prevalence of obesity and overweight in all age groups makes such phenomena is significant research in field and locally .

to display the percentage of obesity and over weight .

In children of nine years old and compare if internationally .

this study made over a period of one year from 1/4/2004 to 1/4/2005 in Damascus .

It is spread in seven schools over different parts of Damascus , such study covered a total of 500 children of nine ages divided equally in males and females . The lengths of children were measured as they were barefooted with raised heads mildly by a measuring stripe . In addition to that the above mentioned children were weighed as they are alight were on a balance of following (CAMARY).

The formula was used: $BMI = \frac{W(Kg)}{L^2(N)}$.

Study showed that 9.6% of males were obese and a bout 14.4% had over weight on the other hand 7.6 of females were obese and 11.2% they had over weight .

Males are subjected to obesity more than females of nine years old are and they over weight.

The percentage of the increasing prevalence of obesity in our country is not less than of that in advancing country.

Key Words: obesity , overweight , Body mass index.

- -
:
8 75
,
19
8
11 . 75
3
2 9
19 . 2003-3-5 2001-4-1
3

≤ \
\ 0,5
10
</20>
:
/

Cystic lesions of the breast: sonographic – pathologic correlation

Eyad Hameed

Dept. of Diagnostic Radiology- Faculty of Medicine

Supervised by :Prof. Aiman Bitar

The purpose of this study is the evaluate the pathologic features of the cystic lesions in the breast and correlation with the echoic appearance.

The study was performed for 75 patients with cystic lesions using the sonography echography of the breast for establishing the diagnosis in the hospital of nuclear medicine and al Al Assad Hospital of Damascus University between 1/4/2001 and 5/3/2003

Then we had done a correlation between the sonographic features of each cystic lesion and the pathologic basis .

This study give us an appropriate assessment and management recommendations for this lesions based on sonographic appearance

The diagnosis was established with fine needle aspiration .

The excision was performed for all malignant and atypical lesions and for two benign lesions one recurred after the excision and the other enlarged at follow-up .

The imaging was performed with high frequency traducers (10MHZ)

The cystic lesions were classified into: Simple cyst, complicated cyst, cyst with thin septation, clustered microcysts, mass with thick wall and / or thick septations, intracystic mass et mixed cystic and solid, solid mass with eccentric foci.

Of 75 lesions, 8 were simple cysts aspirated for symptomatic relief ; of 19 lesions characterized as complicated cysts and one cyst with thin septations , non proved malignant, nor did any of 8 lesions characterized as clustered microcysts. Of 11 masses with thick walls or thick septations , 3 proved malignant . of 9 intracystic or mixed cystic and solid masses, 2 proved malignant. Of 19 predominantly solid masses with eccentric cystic foci , 3 proved malignant.

In conclusion, found that the symptomatic complicated cysts generally warrant aspiration-

All clustered microcysts were benign but further study is required. The cystic lesions with thick walls and / or thick septations intracystic masses and predominantly solid masses with eccentric cystic foci should be examined at biopsy because 20:100 of such complex cystic lesions proved malignant in this series.

Key words:

- Cystic lesions of the breast
- Sonography

- -
:

- - :

/41/

6

The Diagnosis of Diastolic Dysfunction by Echocardiography & its Prognostic value

Ayman Bakeer

Dept. Internal Medicine- Faculty of Medicine

Supervised by :Prof. Pr.M.A.Al Mobarak

The aim of this study is to exclude the prognostic value of echocardiographic indexes of Impaired Diastolic function in Heart Failure Patients

Because Diastolic Heart Failure becomes common, in our modern age knowing that, Echocardiography is easy noninvasive diagnostic method and available in most of medical centers so it provides important benefits in for tilling patient prognosis and guiding the treatment ways.

The 41 patients were studied have been admitted to AL-Mowassat Hospital with a diagnosis of Heart Failure, Echocardiography was done to these patients and diastolic indices were

measured and the patients were followed up after 6 month.

When impaired diastolic function occurs, it is considered bad prognostic that mean a complication can be occurred and must be avoided.

Our study has found that echocardiatic indexes of impaired diastolic function are very useful as a prognostic flag especially DT & IVRT .

Keywords:

Diastolic, Echocardiography, Prognostic.

Rh D

- -
 :
 % 2.85 1994
 . 1998
 anti-D • . Rh D
 ,
 anti-D .
 ,
 anti-D .
 ,
 anti-D 80 , Rh D
 , 35 -17
 1/32 . 2005/5 - 2004/11
 .
 Rh D
 Rh D . ID-DiaPanel micro typing system
 ,
 72 anti-D
 125 , %2.5
 (500)
 , 4 1
 . anti-D
 anti-D
 . anti-D
 anti-D .%100
 :
 anti-D % 2.5 •
 % 1.96 ,

Detection of irregular antibodies in Rh D- pregnant women

Ayman Nasser

Dept. of Laboratory Medicine- Faculty of Medicine

Supervised by :Prof. Tahani Ali.

This research aims at knowing the percentage of Rh D- pregnant women with irregular antibodies , on the basis that each pregnancy equals a transfusion of blood unit to the mother . It also aims at identifying the antibody in case the detection was positive . and if the identified irregular antibody has a role in the fetal maternal immunization.

The study was conducted on 80 Rh D- pregnant

Women. Samples were taken from mothers aged 17- 35 year old, Zahrawi hospital, through the course of November 2004 till May 2005. Dry tubes were used, to take the samples which were centrifuged. Serums were taken in order to perform irregular antibodies test, using gel methods . If the test was positive, we move to the next step which is to specify the type of the antibody using ID-Dia Panel micro typing system.

Irregular antibodies was positive only in 2 patients (2.5%) . The tow patients were multigravida, and did not recall a history of blood transfusion through life. The 1st patient mentioned a history of abortion in the first trimester, after which she did not receive γ -Globulin anti-D. In both cases, the type of the irregular antibody was anti-D(100%).

2.5% was close to local studies. In a study (Dr.Daas 1994), the percentage was 1.96%, while the percentage was 2.85% in another study done in 1998.

The irregular antibody was anti-D in both cases, with no history of blood transfusion.

This often implies a history of abortion or procedure performed without the administration of anti-D thereafter, or the administration of an insufficient dose that couldn't neutralize all fetal erythrocytes that passed to maternal circulation. This resulted in the formation of the irregular anti-D, which indicates the titration of irregular antibodies in mother. If the titre was more than 1/32, this forms an indication to monitor fetus growth, then an amniocentesis if was necessary.

Based on the above results, we recommend that Kleihauer test must be performed to every Rh D-pregnant women who gave birth to Rh D+child

.this test detects the amount of fetal blood which entered the maternal circulation (ml).A sufficient dose is then administered to the mother within 72h after delivery by muscular way, and increasing the dose 125i.u above the regular dose(500i.u)to each 1ml bleeding more than 4ml,to prevent formation of irregular antibody anti-D. The existence of irregular antibody anti-D may cause a fetohemolytic disease.

Key Words: Irregular antibodies* pregnant women * γ -Globulin anti-D

Bcl-2

- - :

Bcl-2

Bcl-2

(B),

(A) (Bcl-2)

) Bcl-2

(

(80)

:

(40) :A

Bcl-2 (40) :B

.() Bcl-2

Bcl-2 expression in the placenta and its correlation with apoptosis

Ghussoun Hammoud

Dept. of Histology-Anatomy and Embryology- Faculty of Medicine.

Supervised by :Prof. Mohamed Ali Alsatli

The Bcl-2 family is the best characterized protein family involved in the regulation of apoptotic cell death. So the aim of this study was to investigate the role of Bcl-2 (anti-apoptotic) in the first trimester abortions in pregnant women with negative and positive antiphospholipid antibodies.

The study was made in the department of histology in the faculty of medicine, between (2002-2004), on specimens of placental villi and decidua which were obtained by curettage from (80) cases of recurrent pregnancy loose in the first trimester of pregnancy which was divided to (40) cases with positive antiphospholipid antibodies (group A) and (40) cases with negative antiphospholipid antibodies (group B), the paraffin sections were used to identify Bcl-2 by using immunohistochemistry with monoclonal mouse anti-Human Bcl-2 oncoprotein (DAKO).

The study was made in the department of histology in the faculty of medicine, between (2002-2004), on specimens of placental villi and decidua which were obtained by curettage from (80) cases of recurrent pregnancy loose in the first trimester of pregnancy which was divided to (40) cases with positive antiphospholipid antibodies (group A) and (40) cases with negative antiphospholipid antibodies (group B), the paraffin sections were used to identify Bcl-2 by using immunohistochemistry with monoclonal mouse anti-Human Bcl-2 oncoprotein (DAKO).

Key words:

- Apoptosis
 - Bcl-2
 - Placenta
- Recurrent pregnancy loose

الإصابة الكبدية الرئوية بداء الكيسات المائية وكيفية تشخيصها

- -

:

200

2003 2001

187

%29

%90.6

%93.4

Kyste hydatique hepatopulmonaire

Houssam Elmakhour

Dept. of Internal Medicine- Faculty of Medicine

Supervised by: Prof.Mahmood Bakeer

L'étude va éclaircir le pourcentage élevé des affections hépato-pulmonaires dans notre pays, et présenter le rôle efficace de l'écho abdominale et du radio pulmonaire, dans le diagnostic, surtout que ces deux examens sont accessibles à tout le monde et dans toutes les régions de pays, au contraire de autres explorations si coûteuses et si compliquées.

Une enquête faite à l'hôpital ElAssad et ElMowassate sur 200 malades et qui sont déjà atteints de kyste hydatique du foie et du poumon et dont 187 parmi d'eux sont traités chirurgicalement.

Approximativement 100% of patients developed leg weakness which progresses to paralysis in 50% of patients, sensation is diminished below the level of spinal cord involvement in 58.5% of patients .

L'enquête montre les résultats suivantes:
1- La synchronisation des atteintes hépatopulmonaires par le kyste hydatique constituent 29% des cas. 2- Le radio simple du poumon diagnostique 90.6% des affections pulmonaires. 3- L'échographie abdominale diagnostique l'affection hépatique dans 93.4% des cas.

L'échinococcose se rencontre fréquemment dans notre pays et sa synchronisation dans le foie et le poumon exige indispensablement l'exploration de ces deux organes en même temps devant toute suspicion. En effet l'ultrasound abdominale et le radio simple du poumon sont deux moyens de diagnostic efficaces et accessibles à tout le monde.

Key Words:

- Echinococcose
- Kyste hydatique
- Ultrasound
- Radio thoracique

- -

. %54 35

TDE

()

2004/8/15 2003/8/15

:

.

:

.

.

-1

.%96 - 85

TDE

-2

Study of Coronary Disease by Tissue Doppler Echocardiography and Comparison the Results with Cardiac Catheterization

Hasan Kweder

Dept. of Internal Medicine- Faculty of Medicine

Supervised by :Prof. Marwan Shamieh

Cardiac catheterization in patients with coronary disease is widely done in latter years as diagnostic and therapeutic procedure and it is invasive procedure thus, since years trials has been done to discover diagnostic ways but noninvasive, which can be replaced to cardiac catheterization, such as Tissue Doppler, which study the motion of fiber of myocardium, and the abnormality in it may suggest presence of myocardial Ischemia.

This study was done in Al-Assad University Hospital, in cardiac catheterization and Echocardiography departments, between 15/8/2003 and 15/8/2004, and included 50 patients who had symptoms of Ischemic heart disease, each of them had catheterization and Tissue Doppler echocardiography and comparison was done between results.

1-Echocardiography has good sensitivity for diagnosis of Ischemic heart disease as sensitivity was 85-96% in diagnosis of Ischemic lesions of the four walls of left ventricle.

2-TDE is non specific way for Ischemic hear disease as specificity was only 35-45% for left ventricular walls.

Low specificity of TDE is due to many cardiac and non cardiac disease which affect the motion of myocardium without coronary lesions, such as diabetes mellitus and hypertension, and can't give option of management (medical, PTCA, GABA), and for these two reasons it requires much development to achieve the goal: most accurate diagnosis by less invasive procedure.

Key Words:

- Coronary disease
- Tissue Doppler echocardiography
- Cardiac catheterization

2005 - - -

- -
:

(%82) 28
4 (%18) 6
. 40

34 2005 2000

.
:

Criteria Needed for the Diagnosis of Antrochoanal Polyps

Ahamad Al Sahli

Dept. of E.N.T-Faculty of Medicine

Supervised by: Prof. M.N.Dandashli

the aim of this study is to determine what principles are enough in diagnosis of antrochoanal polyp and it compares between clinical and radiological finding from one side and between endoscopic and histological findings from other side

The study was conducted at ENT Department in Al-mowassat hospital between May 2000 and May 2005 on 34 patients who were accepted in ENT department with the diagnosis of antrochoanal polyp according to their clinical and radiological finding only, then they had sinus endoscopic surgery and histological examination for the polyp.

The diagnosis didn't differ in 28 patients but it differed in 6. 4 of those 6 patients were > 40 years old.

the definitive diagnosis needs endoscopic and histological finding in addition to clinical and radiological findings, and special attention must be taken in dealing with elderly patients.

Key words :

Antrochoanal polyp, endoscopic surgery, and histology

- -

:

:

.%27.72

%41.87 %58.13

%55.80 %100

%45.83 %86.04

%51.16

150

11-6

%60.46

)

20 (

) (

11-6 %28.67

-6 %19.23 5 -

24-12 %32.5 11

Detection of diarrhea caused by Rotavirus by latex agglutination assay on children under two years

Ahmad Alsahhar

Dept. of Laboratory Medicine - Faculty of Medicine

Supervised by: Prof. Mahjob Jeiroudi &

Prof. Salah Aldin Shahadah.

The aim of this study is to know the percentage of diarrhea caused by Rotavirus under two years and study its spread according to age, sex, and its features, and comparable study of /20/ healthy child.

This study has been done on /150/ child (under two years) of the clinic and temporary settlement department in the children hospital. Those children had non-septic water diarrhea. The study had also included /20/ healthy child with no digestive symptoms. The stool samples had been gathered in order to be studied and examined by microscope. Then the samples had been tested by latex agglutination assay.

The percentage of the patient with positive Rotavirus was 28.67%. The percentage of infected children (from 1-5 months 19.23%, from 6-11 months 32.50%, from 12-24 months 27.72%). The percentage of the male was 58.13% where as the female was 41.87%. They had 100% diarrhea, 86.04% vomiting, 55.80% fever, 51.16% dryness, and 48.83% cough.

The discussion of these results showed that approximately third of non septic diarrhea caused by Rotavirus, and most of the infection were found in age between 6-11 months (60.46%). It has been noticed that the infection percentage among males was more, may be this is because the number of female was less in this study. As for the clinical symptoms it has been noticed that vomiting comes after diarrhea and then fever, dryness. The local results of our study were similar to that of Jordan study in two points: the percentage of positive rotavirus and the age (6-11 months).

Key words:

Detection of Rotavirus.

- - :

3 - 1

()

% 80
(% 90 - 70)

46
2004/1/1

2005/1/1

.% 75

EEG

% 60 - 1

: - 2

: EEG - 3

- 4

L'application du Pizotifen dans le traitement préventif de la migraine

Assmah Nassari

Dépt. De Pédiatrique- Faculté de Médecine

Supervision : P. D. Samir Bakleh

L'étude a pour étudiant but d'étudier les cas des migraines et d'appliquer de Pizotifen dans l'hôpital des enfants comme traitement préventif des crises et de les poursuivre après le traitement.

l'étude a été faite dans l'hôpital des enfants dans le clinique neurologique comme étude pour le future de 46 cas dans le période entre 1/1/2004 et 1/1/2005 et le diagnostique a été base sur l'histoire clinique et l'examen neurologique et l'EEG s'il y a suspicions selon chaque cas.

- 1- Les migraines construiement 60 % de tous les cas des céphalées.
- 2- Les symptômes clinique les plus importants : céphalée bilatéral frontal , les crises sont séparaes par des périodes non douloureuses , s'améliore si on dort ; histoire familiale + dans la plupart des cas .
- 3- L'EEG → onde lent dans la région occipital dans des rares cas.
- 4- L'application du Pizotifen chez les personnes qui souffrent de la migraine comme traitement préventif pour 6 mois prévent des crises dans le future cas il diminue la durée de la crise de 1 à 3 jours jusqu' à quelques heures et il diminue encore la fréquence des crises , mais on a note une augmentation de poids chez un patient.

la migraine est fréquent chez les enfants avec une histoire familiale + $\approx 80\%$ selon notre étude et cela correspond avec les étude internationales (70 – 90 %) est il n'y a pas une prédilection entre les 2 sexes , le genre le plus fréquent est la migraine commune (qui constitue 75 %) le Pizotifen a été appliqué dans notre études dans la plupart des cas comme traitement préventif, et on a constaté son importance sur les durée et les fréquence des crises avec des effets secondaires rares et la facilité des patients pour le prendre pour 6 mois avec l'amélioration scolaire chez certains enfants grâce à l'absence des symptômes et ses raretés.

Key words:

céphalée, migraine, Pizotifen .

Bisoprolol

Echocardiography

- -

:

%15 3

Echocardiophy

Bisoprolol

 /6.37/ (LVEDD) β)

 (0.67)

(0.66) /6.13/ (EF)

 /5.53/ ()

 (0.87) .(LVESD)

 /5.46/ (LVESD)

/ (0.83)

 (0.68) /5.26 NYHA

 .(0.84) /4.84/ : ()

:

%32 EF :

%34 (8.46) :

%36 (8.67) :

 .(8.52) ()

7.5 – 2.5 Bisoprolol

.

LVEDD EF

 lvedd Bisoprolol LVESD

6.13 6 6.37

 Lvesd 5.53 . :

		6	5.64		
β			4.48		5.26
)	Bisoprolol			EF	
.(%36	%34	6	%32

:
 Bisoprolol, Echocardiography. Heart failure

The significance of Echocardiographic changes in evaluating the therapy with bisoprolol in patients with heart failure

Bassel Ahmad

Dept. of Pharmacology- Faculty of Medicine

Supervised by : Prof. Hend Daoud

This study has been conducted in order to determine the significance of utilizing of the echocardiography in evaluating the treatment with Bisoprolol (a B adrenergic receptors blocker with high selective affinity for B₁ receptors) in patient with heart failure of different stages by measuring the ejection fraction (EF), the left ventricle end diastolic diameter (LVEDD), and left ventricle end systolic diameter (LVESD).

The study was performed on twenty patients with heart failure in AL – ASSAD University Hospital the patients were classified according to NYHA to: stage I : two patients stage II : four patients stage III : nine patients and stage IV : five patients. The patients with heart failure were all given the Bisoprolol in dosages between 2.5 – 7.5 mg in addition to their other medications.

The EF, LVEDD and LVESD were measured before, after six months, and after one year of the beginning of therapy.

Death occurred in 3 of all patients (15%) the mean for LVEDD was (6.37) cm before treatment. With Standard Deviations (SD) of (0.67) after six months it was (6.13 cm \pm 0.66 SD) and after one year it was (5.53 cm \pm 0.87 SD) The mean for LVESD was (5.46 \pm 0.83 SD) before treatment it was (5.26 cm \pm 0.68 SD) after six months and (4.84 cm \pm 0.84 SD) after one year the mean for EF

was (32 % \pm 8.46) (36 % \pm 8.52) respectively .

These results indicate the improvement in left ventricle diameters which decreased after treatment with Bisoprolol. The mean for LVEDD was 6.37 cm before treatment 6.13 cm after 6 months and 5.53 cm after one year of treatment The mean for LVESD was 5.46 cm before treatment 5.26 after 6 months and 4.48 cm after one year, of treatment An increase was noticed in EF which reflects the improvement in left ventricle function as the mean was 32% before treatment 34% after 6 months and 36% after one year.

The results mentioned above confirm the importance of treatment with β Blockers in patients with heart failure of all stages as the Bisoprolol gives here a significant benefit (but we should keep in mind the small sample of our study). These results also show clearly the importance of utilizing the echocardiography as a judgment method on the degree of response to treatment in heart failed patients by measuring of the variants mentioned above.

Key Words:

Bisoprolol, Echocardiography, Heart failure.

Nasal Septum Deviation

Bachar Hassan

Dept. of E.N.T- Faculty of Medicine

Supervised by :Prof.Nasser Al Haj

Since the nasal septum plays one of the biggest roles in the nasal function, we have to study the shapes of septum deviation, their reasons and resulting disorders of this pathology. Then we explained the main symptoms, that the patient might have, surgical treatment, its principles and approaches. We also mentioned the 2 main approaches that we generally use. (1- SMR 2- Septoplasty) indications, contraindications and postoperative complications .

We studied the files of 413 patients with nasal septum deviation in the ENT department at Al-Mowassat Hospital from 2003 to 2004.

Our study showed that the major percentage of age (69.2%) was between 17 and 25 years old (males 74.8% , females 25.8%) . The main symptoms in the patients' history were nasal obstruction. During the examination, we noticed that the ratio of the right, left and mixed shapes of deviation was approximately the same. Finally, we compared the 2 operative procedures and we found that the septoplasty approach was the most used one (96%).

1. The major percentage was between 17 and 25 years old, since this period is the golden time for trauma. The main reason of this result was the delay of cases from younger age until the deviation takes its final shape.
2. According to age, our results were familiar to those in Germany (8) while according to sex they showed different percentage, since in German study improved that females are more interested in rhinoplasty more than septoplasty (16%) .
3. In the last 2 years, Rhinoplasty got more popular in females especially between 18 and 30 years old.
4. There is a decrease in the use of SMR in the last 2 years.

Key words:

nose, deviation, septoplasty, surgery ...

% 46

% 36

3.9

502 -

28

25

.2004 -2002

(Olympus xQ - 10)

Oleat or polidocanal

2%+ Alcohol 98%

BARD Interventional

overtube Product

Comparison of Endoscopic Sclerotherapy and Endoscopic Ligation for Bleeding Esophageal Varices

Dima Jabbour

Dept. of Internal Medicine- Faculty of Medicine

Supervised by: Prof. Noufal Jajeh

the variceal obliteration is achieved in 46% with Ligation and 36% with sclerotherapy.

The average time to obliteration is approximately 3.9 sessions With endoscopic ligation and 5.2 sessions with Sclerotherapy.

The patient should have repeat endoscopy every two weeks after The initial two sessions with band applications as need until there are no varicis left to treat .

Key Words:

portal hypertention - Esophageal varices - Endoscopic ligation- Endoscopic sclerotherapy .

Endoscopic variceal ligation was developed in an Effort to find an effective means of treating esophageal variceal Endoscopically with fewer complications than sclerotherapy.

We studied 53 patients had different stage of esophageal varices 25 patients treated with sclerotherapy and 28 with endoscopic Ligation The endoscopic variceal ligation is BARD intervention al Product with overtube .

Sclero therapy was performed using 0.5-2.5 ml of Oleat or Polidocanol 2% + alcohol 98%.

-16)

(20
.(18

% 85.18 % 92.59)

Quality of Life

6

%81.48

27

/

. 2005/6/ 1 2003/6/1

%11.11

Dermatology Quality Life Index . . .

% 48.14

6

4.92: 6 17.33

. 12.41:

-16)

Quality of life in patients with Pemphigus Vulgaris and the impact of treatment with systemic corticosteroids on it

Malda Daoudi

Dept. of Dermatology & Venereology- Faculty of Medicine

Supervised by :Prof.Saleh Daoud.

Pemphigus Vulgaris is a chronic dermatoses which threatens life if left untreated. Systemic corticosteroids are considered to be the treatment of choice. Despite its well known side effects, corticosteroids had improved the survival rate significantly. The aim of this study is to evaluate the quality of life of patients with pemphigus vulgaris and to assess the impact of treatment on it.

The study included 27 patients affected with Pemphigus Vulgaris and who came to see us in the Hospital of Dermatology, Venereology/Damascus University in the period between 1/6/2003 and 1/6/2005. The patients had completed the Dermatology Life Quality Index (DQLI) questionnaire two times; directly before starting the treatment and six months later. Results were analyzed and compared.

The median of DQLI scores before starting the treatment was 17,33 and improved in the second visit to 4,92. The median of improvement was 12,41. The sex didn't have any effect on the results while it was clear that patients in the younger age group(16-20years) had a maximum amelioration the DQLI scores (16-18 points). The DQLI scores were improved in the categories of feeling and symptoms, and the daily activities in most of the patients (92,59% and 85,18 % of the patients respectively) after initiating the treatment and the improvement varied between one and six points. The use of corticosteroids was accompanied with great amelioration in the work and study in

81,48% of patients. Neither the illness nor the treatment had a big influence on the DQLI scores since the beginning. The expenses of treatment and the mess and loss of time due to it had the only and biggest negative influence on the DQLI scores;11,11% of the DQLI scores regarding treatment deteriorated between the two visits and 48,14% of patients have had bad DQLI regarding treatment since the beginning.

A minority of patients were still having a considerable impairment in the DQLI scores related to symptoms and feelings and daily activities in the second visit because of the persistence of a mucosal or cutaneous lesion resistant to therapy besides of developing side effect related to physical appearance and leading to embarrassment such as cushingoid appearance, acne and hirsutism. The big improvement in the work and study in the second visit indicates the positive impact of corticosteroids on life and society. The mess related to treatment, the expenses and the need of buying the medication for long periods of time resulted in deteriorating in DQLI related to treatment.

Key words : Quality of life, Pemphigus Vulgaris, Systemic Corticosteroids.

2004-2001

- -
:

)
()
- -
(-
.2004/1/1 2001/1/1

74

% 93.8	16	2001
%88.5	27	2002
%75	12	2003
%68.4	19	2004

- :
-

Streptococcus Pneumonia Resistance to Macrolide in children's Hospital in 2001-2004

Wael Kassem

Dept. of Pediatrics- Faculty of Medicine

Supervised by :Prof.Mujeeb Melhem

Macrolides was discovered sixty years ago, it's importance was because of it's broad spectrum similar to penicillin, specially in allergy patients who cannot be given penicillin, recently the increase in Macrolide resistance has been reported, companion to penicillin resistance which documented worldwide.

The study was done in University children's Hospital in Damascus, to study Streptococcus pneumonia susceptibility to Macrolide [Erythromycin], comparing to susceptibility to penicillin in all isolates specimen (blood - Cerebrospinal fluid – abscess – ascites – pleural effusion).

between 1/1/2001 – 1/1/2004

Results: There was 74 pneumococcal positive culture isolates

2001 16 isolates susceptibility to Erythromycin 93.8%

2001 27 isolates " " " 88.5 %

2001 12 isolates " " " 75 %

2001 27 isolates " " " 68.4 %

increasing in Streptococcus Pneumonia resistance to macrolide, which companion to streptococcus pneumonia resistance to penicillin, as reported in universal studies.

Key Words:

Streptococcus Pneumonia – Erythromycin
- Penicillin

MAIT -

E1

- - :

. 40

) MAIT

(

H.Pylori MAIT

)

.(P.P.I

E1

CT- (Masshoff)

H.pylori . Scan

(%52.5)

1 : 1.1 (%47.5)

(60-50)

%45

MAIT

%62.5 - %90)

(%60 -

2000/2/2

30 .%40

2005/2/1

() (%75)

80-40

MAIT H.pylori
5 6
(H.pylori)
-) - :
- (MAIT
E1

Antibiotics and proton pump inhibitors (P.P.I) for primary gastric low grade E1, MAIT lymphoma, H.pylori +

Ramy Abu Khamees

Dept. of Internal Medicine- Faculty of Medicine

Supervised by : Prof. Aasef Dayoub

Despite an abundant literature on histologic, clinical and biological features of MAIT lymphoma. Final results of controlled trials to define the optimal therapy have not yet been published. Published data are confusing. Treatment of MAIT lymphoma previously depended on (surgery, chemotherapy, radiotherapy) or their combination.

Due to the increase in the side effects and the complications of previous therapy, the aim of the study was to find the most effective and least side effects and complications therapy. Here, my role was to put the spot on the treatment using the Antibiotics and (P.P.I) (Triple Therapy). For gastric MAIT-lymphoma.

Materials and methods: the records of 40 patients, their ages between (40-80) y with primary gastric low grade, E1 (lesion confined to the gastric wall), Hpylori+, according to musshoff system confirmed by CT-scan, were reviewed in the random retrospective study, which covered 5 years. These patients were admitted to Al Al Al Mowassat and Al-Assad University Hospital between 2/2/2000 and 1/2/2005. Diagnosis defined on the basis of age, sex clinical picture, proximal endoscopy, patho-histological verification and detecting the presence and absence of H. pylori before and after the treatment.

The female (52.5%) to male (47.5%) ratio was 1.1:1. peak age incidence was 50-60 year. non specific symptoms such as epigastric pain, night sweating, low grade fever (90% - 62.5%, 60%) respectively were the most common symptoms. The superficial type was the commonest endoscopic finding. 30 patients achieved complete remission (CR) after triple therapy and eradication of H. pylori within 6 months and no recurrence noted throughout 5 years interval.

Our data confirm (antibiotic+ P.P.I) therapy as the first choice treatment for early-stage low-grade MAIT lymphoma and encourage to wait with confidence for remission after eradication of H. pylori.

Key words:

Triple therapy – MAIT lymphoma – H. pylori



- - :
:

20
.Instron

(P < 0.05)

)

(

(P > 0.05)

80

50x5x3

(40)

(40)

20

:

The effect of Glass Fibers on Flexural and Impact Resistance of Acrylic Resin

Fahad Tanous

Dept. of Prosthodontics- Faculty of Dentistry

Supervised by : Prof.Fandi Al Sharani

One of the most widely used materials in prosthetic dentistry is polymethyl methacrylate , but the primary problem in it is its poor strength characteristics including low impact and flexural resistance and fatigue resistance .

the purpose of this research was to evaluate the effect of glass fibers on mechanical properties (impact and flexural resistance) of heat-cured acrylic resin.

The research contained 80 acrylic specimens whose dimensions $3 \times 5 \times 50$ mm and were divided into two groups ,one group (40 specimens) reinforced with glass fibers and the second (40 specimens) without glass fibers .Impact test has been made by an impact tester and transverse has been made by tension instrument (instron).

The statistical study showed that glass-reinforced acrylic resin specimens were significantly more resistant to impact resistance ($0.05 > P$), but fiber reinforcement has no significant effect on the transverse resistance ($0.05 < P$) .

glass fibers increase impact resistance of acrylic resin but they have no effect on transverse resistance .

Key words: Acrylic Resin, Glass Fibers, impact resistance, flexural resistance.

(Hero642)

.04/25 0.02/20
ANOVA

.Kruskal-Wallis

Micro Mega Hero642

0.02/20#
0.04/25#

30

Gabel °60 -°30
bryant / 300
(1999) / 30000
(1998) 56:1
0.04/35# Hero642

0.02/ 20#
Ni-Ti

- Hero642 :

20/0.02

Comparison of nickel-Titanium files distortion using electric and air-driven hand pieces

Wafa Al-Aajam

Department of Endodontology- Faculty of Dentistry.

Supervised by: Prof.Salem Rekab.

The air-driven and electric hand pieces are both currently available for use with nickel-titanium files. The aim of this in vitro study was to determine whether there is a difference in the frequency of file separation/ distortion when an electric hand piece was compared with an air driven hand piece.

Thirty root canals from extracted human molars were collected and fit the following criteria: minimal caries, curvature between 30°-60°, the air driven hand piece was used at 30000 rpm and electric hand piece was used at 300 rpm according to the manufacturer's recommendations. they were mounted in a 1.5×3.5 blocks made of gypsum and sawdust. The roots were instrumented with nickel-titanium Hero 642 system under controlled conditions. they were divided into two groups, group (I) electric hand piece were used, group (II) air-driven hand piece were used. files were examined both before and after use to evaluate whether breakage or deformation had occurred.

statistically There was no significant difference in file breakage or distortion when both hand pieces were compared, there was only one fracture file #20/0.02 in each gp and three distorted instruments one with group I and two with group II.

The smallest file #20/0.02 demonstrated the greatest number of distortions in both groups and these can be explained logically that narrower canals are more difficult to instrument .This is agreed with studies done by Gabel et al in 1999 but in contrast with Bryant et al in 1998 whom found that files #35 then #30 failed most.

when considering file usage, it may be prudent to consider the file # 20/0.02 a disposable instrument .

Keywords: Hero 642 – Ni-Ti files – file distortion and separations.

96 : ■ (Opalescence)
cp
(% 20 - 15 - 10)
V (Tetric ceram - Charisma)
24 : -I
Stereomicroscope (SEM)
.05 T -II
96 : ■
(6) (3
24

:
.Opalescence : 40
-Goody 'Spyrides 'Cooly 'Turker SB
: Crim GA Carcia

.(Tetric ceram - :
.Charisma)

Do Bleaching products containing carbamide peroxide affect composite fillings?

Rania Al Hourani

Dept. of Endodontics- Faculty of Dentistry

Supervised by :Prof. M. Salem. Rekab

The Aim of this study was to evaluate the effect of bleaching gel (opalescence) containing different concentrations (10-15-20%) of Carbamide Peroxide on two composite materials (charisma-Tetricceram) according two points of view:

- I- Surface morphology of composite restorations by using scanning electron microscope (SEM).
- II- Microleakage of class V cavities restored with mentioned composites.

Two Samples were prepared:

Group1: Included 96 freshly extracted human premolars. Glass V cavities were prepared on facial surfaces divided into four groups each containing 24 premolars tube studied by stereomicroscope.

bleaching gels in different concentrations and according to both periods of administration have verses results on surface morphology reveal in surface roughness, and they are increase the microleakage of class V cavities.

Our results agreed with the results of studies done by Baily S J, Turker SB, Cooly, Spyrides GM, Garcia-Gooday and Crim GA.

Exact examination to composite fillings recommending before bleaching. New filling must administrate after two weeks of bleaching.

Key words: Bleaching Gel : Opalescence Peroxide Carbamide; Effective agent in bleaching gel composite resins; (Charisma – Tetricceram) fillings.

Expasyl : :-2-

.()

40

(20)

:(4-3-2-1)

(0.01)

(Rastyptine-Expasyl)

Racestyptine

Racestyptine:

:

:-1-

()

(-)

)

(

0.1) /ملم2.

Clinical Evaluation of Gingival Retraction Paste and Cord which Containing Aluminum Chloride

Rima Saker

Dept. of Crowns & Bridges- Faculty of Dentistry.

Supervised by :Prof. Merza Allaf

The purpose of this study is to evaluate the clinical performance of gingival retraction, paste and cord which containing aluminum chloride, in making a vertical and lateral retraction. The importance of the study is to choose the best for making the requested gingival retraction in order to obtain an accurate duplication of prepared tooth margins especially sub-gingival margins, and getting the best marginal fit to the final restoration.

(40) Abutments were used and divided into 2 groups (20 abutments for each group). They are prepared for complete ceramometal crowns with sub-gingival shoulder at buccal surface and with chamfer at the level of gingiva on other side. The periodontal tissue was normal. Two materials were applied:

1- Retraction cord: which is Racestypine consists of aluminum chloride and lidocaine.

2- Retraction paste: which is Expasyl consists of aluminum chloride, kaolin, water, oil of lemon, colorant.

An impression with poly vinyl siloxane was made before and after retraction, then casts were made and the plaster abutment were sectioned bucco-lingually at the middle of the surface parallel to the longitudinal axis of tooth, then it was polished perfectly.

The measurement of width of the sulcus was made before and after retraction (vertically & laterally) by using microscope.

The results are shown on the following tables (1-2-3-4):

There are no significant differences between two materials (Racestypine) at ($p < 0.01$) related to Racestypine in obtaining the best gingival retraction (vertically & laterally) after applying the material.

There are significant differences between two groups (paste & cord) related to cord in making a greater gingival retraction although they have the same hemostatic agent. Perhaps it is related to the ability of cord's inserting in the sulcus without causing damage to epithelial attachment greater than the paste's ability of entering in the sulcus under the effect of the pressure which is caused by applying paste with specific applicator about (0.1) N/mm². Or it may be related to the cord's ability of extending the circumferential periodontal fibers greater than paste.

Or perhaps to losing the paste's viscosity which gives the mechanical retraction when it contacts with oral moisture (saliva, or liquid of gingival sulcus) while the cord does not effect with this matter in its mechanical action, while its impregnated with liquids sometimes cause an expansion in its volume and this will increase the mechanical action.

Key Words: Gingival retraction, Expasyl, Gingival cords, Making impression, Fixed prosthesis, Access to prosthetic margin

عينة الـ expasyl قبل التبييد			
الإلتصاع العمودي		الإلتصاع الأفقي	
إلتصاع لسانتي عمودي بعد	إلتصاع دهليزي عمودي بعد	إلتصاع لسانتي أفقي بعد	إلتصاع دهليزي أفقي بعد
400	600	420	800
310	310	330	600
400	110	570	560
200	340	620	600
180	280	250	810
240	420	740	800
480	200	650	800
380	220	450	380
220	280	320	540
310	310	520	500
280	140	460	800
310	310	600	380
300	160	200	280
200	180	200	440
310	420	450	400
350	420	350	640
190	200	710	800
630	650	600	800
190	300	620	600
430	380	680	580

الجدول-2-

عدد
الدعامات

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

عينة الـ expasyl قبل التبييد			
الإلتصاع العمودي		الإلتصاع الأفقي	
إلتصاع لسانتي عمودي قبل	إلتصاع دهليزي عمودي قبل	إلتصاع لسانتي أفقي قبل	إلتصاع دهليزي أفقي قبل
190	280	410	620
130	130	200	200
100	40	180	500
100	200	220	290
130	90	210	410
100	180	220	480
175	110	480	170
200	200	240	180
100	90	200	240
130	130	310	250
80	100	290	240
130	130	400	200
200	140	160	280
200	80	180	340
130	130	210	120
200	240	180	300
80	40	420	300
100	100	220	310
30	100	340	480
200	200	280	240

الجدول-1-

عينة الـ racestypine بعد التبييد			
الإلتصاع العمودي		الإلتصاع الأفقي	
إلتصاع لسانتي عمودي بعد	إلتصاع دهليزي عمودي بعد	إلتصاع لسانتي أفقي بعد	إلتصاع دهليزي أفقي بعد
780	360	990	820
560	520	910	890
450	430	990	970
500	630	760	920
620	420	820	700
450	430	700	540
460	410	600	640
450	430	940	800
570	210	800	960
430	340	880	820
360	480	500	740
460	430	800	870
300	100	980	600
250	400	900	850
400	750	600	900
250	450	900	400
470	480	700	940
420	490	800	910
510	420	600	410
460	430	600	580

الجدول-4-

عدد
الدعامات

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

عينة الـ racestypine قبل التبييد			
الإلتصاع العمودي		الإلتصاع الأفقي	
إلتصاع لسانتي عمودي قبل	إلتصاع دهليزي عمودي قبل	إلتصاع لسانتي أفقي قبل	إلتصاع دهليزي أفقي قبل
200	150	280	240
250	240	220	260
400	300	220	300
110	380	320	240
180	200	440	300
150	400	150	420
120	300	240	260
110	80	260	300
110	100	210	160
110	140	120	300
230	100	110	120
450	400	400	440
200	80	450	200
60	100	140	400
80	60	340	260
140	80	300	300
380	140	200	400
400	400	720	440
200	200	420	300
200	200	240	400

الجدول-3-

B12

vit B12
 (9.4±6.03ng/ml) (340.7±211.4pg/ml) vit (AEDs)
 Antiepileptic drugs
 : (Cytochrome P450) P450
 vit B12
 (CBZ) Carbamazepine
 (Mean±2SD=249.9±178.8pg/ml) P450 (VPA)
 (Mean±2SD=7.2±4.5ng/ml) vit B12
 (Mean±2SD=285.9±207.4pg/ml)
 (Mean ±2SD=7.8±6.3ng/ml) 187
 ;
 .P < 0.05 (52 48) 100
 22) 47
 vit B12 (25
 40
 (Mean ±2SD=342.5±138.2pg/ml) (22 18)
 (Mean ±2SD=9.9±5.2ng/ml) vit B12 :
) (Mean±2SD=364.9±113.5pg/ml)
 (Mean±2SD=10.5±6.4ng/ml (9.2±6.7ng/ml) (309.2±125.26pg/ml)
 .P>0.05

"
vit B12

(VPA)

(CBZ)

450

.

.P<0.05

:

.B12

Investigation of vitamin B12 and folate deficiency in epileptic Syrian patients

Dima Mahmoud

Dept. of Biochemistry & Microbiology- Faculty of Pharmacy

Supervised by : Prof. Dr.Muhidien Jouma &

Prof. Ghada Al Akhras

Epileptic patients receiving some AEDs are at risk for folate and vitamin B12 deficiency by hepatic enzyme induction (cytochrome 450) like carbamazepine.

Data on valproate (VPA) effects on folic acid are conflicting.

This study involved 187 subjects divided into groups: control group 100 subjects (48 males and 52 females), epileptic patients treated with carbamazepine 47 subjects (22 males and 25 females), epileptic patients treated with valproate 40 subjects (18 males and 22 females).

The concentrations of serum vit B12 and folate in male control group (Mean \pm 2SD=309.2 \pm 125.26) and (Mean \pm 2SD=9.2 \pm 6.7) respectively, and the concentrations of serum vit B12 and folate in female control group (Mean \pm 2SD=340.7 \pm 211.4) and (Mean \pm 2SD=9.4 \pm 6.03) respectively. The levels of serum vit B12 and folate were decreased significantly in male and female epileptic patients treated with carbamazepine (CBZ) compared with that in control group (Mean \pm 2SD=249.9 \pm 178.8, Mean \pm 2SD=7.2 \pm 4.5, P<0.05) and (Mean \pm 2SD=285.9 \pm 207.4, Mean \pm 2SD=7.8 \pm 6.3, P<0.05) respectively, P<0.05.

There were no significant differences in the serum levels of vit B12 and folate between male and female epileptic patients treated with valproate (VPA) and control group (Mean \pm 2SD=342.5 \pm 138.2, Mean \pm 2SD=9.9 \pm 5.2) and (Mean \pm 2SD=364.9 \pm 113.5, Mean \pm 2SD=10.5 \pm 6.4) P>0.05.

We found that the levels of serum vit B12 and folate were decreased significantly in male and female epileptic patients treated with carbamazepine (CBZ) compared with that in male and female epileptic patients treated with valproate (VPA), (P<0.05).

Our results may be explainable by the different biotransformation pathway of (AEDs), CBZ induces and VPA inhibits cytochrome 450. This may explain why the vitamin status differs between the two antiepileptics.

Key words:

Epilepsy, carbamazepine, valproate, folate, vitamin B12.

781 P13.3 (Familial
 / Mediterranean fever FMF)
 48
 E148Q, V726A, M694V, M694I,
 M680I
 6:1
 E148Q
 126 72-12
 FMF
 1.2 V726A, % 1.6 M694V, % 5.56E148Q
 %
 FMF
 16 MEFV

Mutations Frequency and the Percentage of Familial Mediterranean Fever Gene Carriers In Syria

Hanadi Mutait

Dept. of Internal Medicine- Faculty of Medicine.

Supervised by: Prof.Muhi eldin Jumaa,

Prof.Salwa Al-Sheikh

Prof.Valeri Dilago

Prof.Andree Mukarbanah

Familial Mediterranean Fever(FMF) is an autosomal recessive disease of high prevalence around the Mediterranean countries with four ethnic groups being particularly affected, namely Arabs, Non-Ashkenazi Jews, Armenians, and Turks. Typically it presents as acute episodes of periodic fever accompanied by complains of abdominal pain , chest pain, or joint pain . The actual attack usually lasts from 12 to 72 hours, with arthralgia or arthritis often lasting longer. The most dangerous potential complication of FMF is amyloidosis that can lead to end-stage renal failure. Atypical phenotypic presentation makes diagnosis difficult. The administration of colchicines constitutes an effective treatment. The responsible gene, MEFV, is placed on chromosome 16p13.3 and it encodes 781 aminoacid protein, Pryn/Marenostrin.

About 48 mutations have been identified so far, some of them being very frequent, accounting for a high percentage of patients. Founder effects have been postulated to be responsible for the high frequency of certain mutations in selected populations, rather than recurrence. Molecular epidemiological investigation of the Syrian population reveals that about 1:6 is a carrier of one of five mutations, E148Q being the most frequent. Among 252 MEFV chromosomes analysed, the gene frequency was :E148Q 5.56%, M694V 1.6%, V726A1.2 % . This study clearly shows a high gene frequency in Syrian population, and open the way for further investigations on patients diagnosed to have FMF and in whom no mutations were found .

Key Words : Familial Mediterranean Fever , Pryn- marenostrin gene , Syrian .

SYBR Green I

sigmoidal curve

3
0.6 0.5
55°C
CMV
real-time PCR
17
kit thermocycler
:
LightCycler
SYBR Green I
crossing
point (Cp)

Optimization of Different Human Cytomegalovirus Real-Time PCR Assays in SYBR Green I Format

Wafa Habbal

Dept. of Clinical Chemistry & Microbiology- Faculty of Pharmacy.

Supervised by: Prof. Fawza Monem.

Real-time PCR has been widely considered as a powerful marker for the evaluation of Human Cytomegalovirus (HCMV) DNA kinetics. Successful PCR relies on optimization which is an extremely demanding procedure. Nevertheless, there could be certain optimal values for most primers in use.

Being recommended in the literature, 17 HCMV primer sets were selected for optimization in terms of MgCl₂ and primers concentrations as well as annealing temperature using the LightCycler instrument and SYBR Green I detection format. Optimal values were considered as those that showed the lowest crossing point (C_p), the highest

fluorescence intensity, the steepest sigmoidal curve slope and the least formation of non-specific PCR products.

Optimal values for most studied primers were found to be 3 mM for MgCl₂ concentration, 0.5 μ M and 0.6 μ M for primers concentration, and 55 °C for annealing temperature. Adopting these values for CMV specific primers generally used in real-time PCR assays with the same thermocycler and kit may guarantee their efficient performance minimizing cost and time needed for optimization.

Keywords: HCMV primers, real-time PCR, optimization.