MANAGEMENT OF UMBILICAL GRANULOMA

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ABSTRACT

A prospective study to 125 babies complain from umbilical granuloma 64 males, 61 females they classify into 2 groups, first group (65 babies) are treated by cauterization while second group (60 babies) are treated by double ligation between period 1st jun. 2009 31st dec. 2009 We found that the recurrence rate after double ligation (5 babies 8%) while after cauterization about(15 babies 23%) So we advice to use double ligation in treatment of umbilical granuloma in newborn babies which less recurrence and less complications than ordinary cauterization.

Aims of the study

Comparison of two methods for managements of umbilical granuloma (cauterization vs double ligation) to be use the best method , less recurrence , less complications

INTRODUCTION

Umbilical granuloma (UG) is the most common umbilical abnormality in neonates, causing inflammation and discharge. Most of them fail to epithelialize and persist for more than 2 months some time with discharge Umbilical discharge is not an unusual presentation in infants and children. (1,2) An umbilical granuloma looks as small piece of bright red, moist flesh that remains in the umbilicus after cord separation when normal healing should have occurred. It is a small piece of scar tissue, usually on a stalk, that did not become normally covered with skin cells. It contains no nerves and has no feeling.(3)

Cause

The cause of umbilical granuloma is related to how well the tissue is healing during the drying up process, but the exact cause is unknown.(1)

Differential Diagnosis

1-Umbillcal Polyp
2-Urachal Anomaly (bladder communication)
3-Omphalomesenteric duct anomaly (bowel communication)
4-Umbilical Mass
a-Ectopic pancrease
b-Umbilical Hernia

Management:

1-Topical Treatments
the most common treatment is topical application of concentrated silver nitrate solution or stick (75 percent). causes chemical burns to the periumbilical area are a possible
complication of this technique, caution is imperative.(4-5) Careful drying of the umbilical exudate to prevent spillage is essential in preventing staining of the skin or chemical burns. Further protection can be attained by isolating the skin around the umbilicus with petroleum jelly before each application. Cryosurgery is another treatment option. Surgical excision of umbilical granulomas is rarely necessary. (6'7)
2-Double Ligature
The double-ligature technique overcomes

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the technical difficulty of ligating the granuloma on its base. After cleansing and preparing the per umbilical area with a povidone-iodine solution, 3-0 silk sutures are used for ligationThe double-ligature technique is simple to perform and provides good cosmetic and functional results with only minor complications. The granuloma becomes necrotic and drops off within 7 to 14 days(8)

Complications of procedures

Rarely, what looks to be an umbilical granuloma is actually tissue from the bladder or bowel. This condition will require surgery. (1) The common complication is bleeding (especially in friable lesions) So contraindications of these procedures are:-

1-Large granulomas with wide base
2-Small, deep umbilical granulomas
3-Very friable lesions (9-10)

Patients and Methods

The sample of this study consists of 125 babies who complain from umbilical granulomas at Bint AI Huda children and maternity hospital and AI Hussien teaching hospital as well as our privat clinics between 1st jun. to 31st dec. 2009 We divided them into 2 groups , first group treated by ordinary methods cauterization while second group by double ligation.

Initial Care of umbilicus:

1. Cleanse umbilical area when soiled with urine or faeces with soap and warm water
2.Keep the umbilical area clean and dry
3.Expose the umbilical area to the air by rolling back the top of the nappy (11-12)

After that treat babies in first group by cauterization

1-Dry Skin of any umbilical exudates
2-Protect surrounding skin with petroleum jelly.
3-Apply silver nitrate to granuloma only **(9-10).**

The second group treated by double ligation .

1.Apply povidone-iodine (betadine) to periumbilical area.
2-Tie stay Suture with 3-0 Silk Tied around protruding stump of umbilical granuloma**.**
3- Assistant hold up stay Suture
a-Raises umbilical granuloma
b-Uncovers deeper base of umbilical granuloma
4-Tie second ligature (3-0 silk) at base of exposed stump
5-Additional Suture may be needed for large granulomas
6-Anticipate granuloma will falloff in 7-14 days **(9-10)**

Then follow both groups after few days then 10 days then one month to show any recurrence or other complication**.**

Results

Table (1) - shows 125 patients with umbilical granuloma treated, Table (2) shows sex distribution, Table (3) shows Age distribution, Table (4) shows Type of labour, Table (5) shows Occupation, Table (6) shows Maturity.

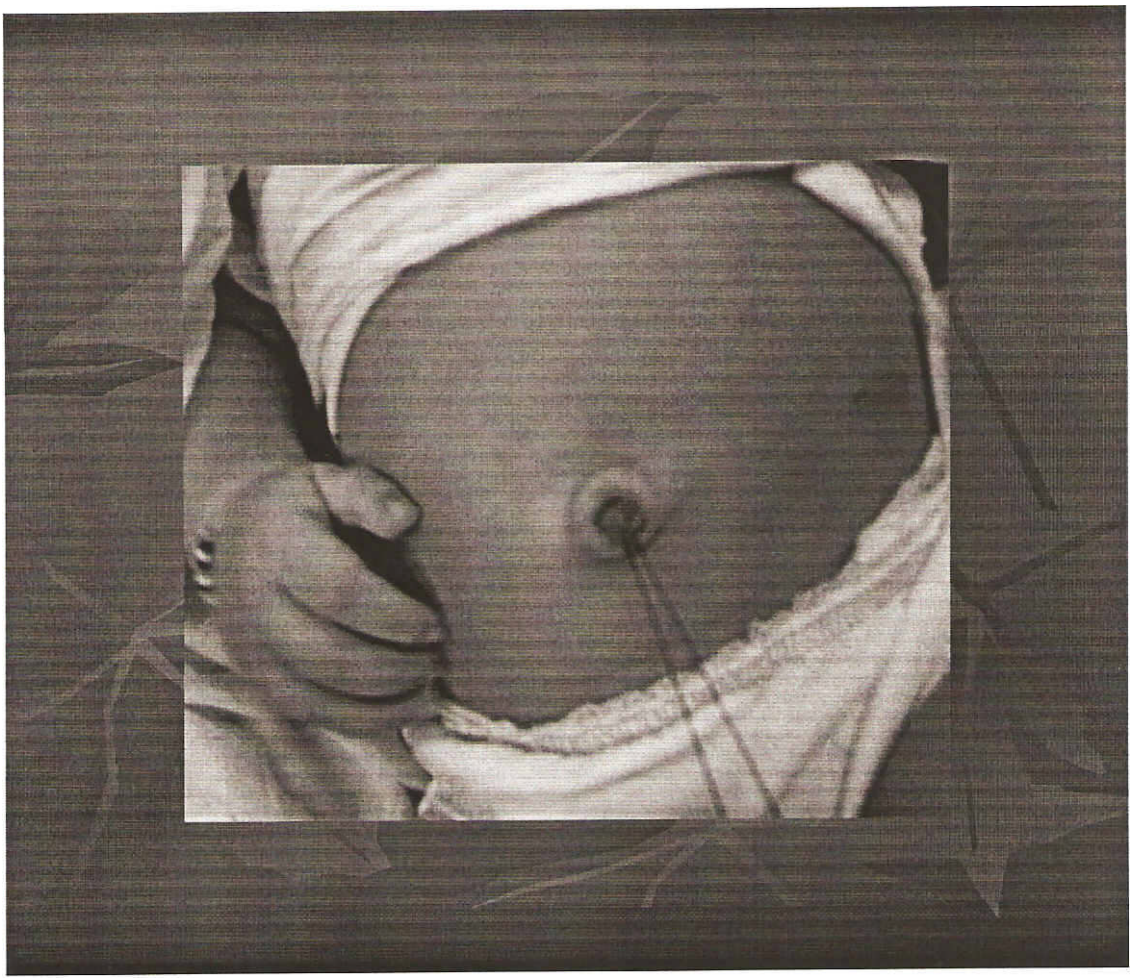
Discussion

An umbilical granuloma is a condition that can develop in a newborn baby's umbilical stump. Umbilical granulomas develop in about 1 out of 500 births . Umbilical granulomas can be easily treated in the doctor's office most of the time (1) ,there are 2 important methods of management The common treatment is application of a 75% silver nitrate stick, usually repeated two to three times of clinic visits. Burns have been reported following spillage onto the surrounding tissues, other method is using excision and application of absorbable haemostatic materials.(2,3).In our study we compare 2 methods we find that babies who treated with double ligation they have less recurrence rate than who treated with ligation (5 among 60 patients 8%) while second is (15 among 65 patients 23 %) as in table 1 and figure 1 .The Chi square is 4.9 its more than 3.8 so the p value is less than 0.05 most of recurrent cases are male more than female table 2 and figure 2 (22% to 10%). H .Nagar in his study 320 neonates were

treated for UG using excision and application of absorbable haemostatic materials. Healing was uneventful in all cases, and no complications have been encountered(2) When we look to table 3, the most common age group affected by umbilical granuloma in the second month of life (60 among 125 about 48 %)then (third month 32 among 125 about 25 %), may be because many parents don't notice it unless they push down gently on both sides of the belly button.(umbilicus) It frequently has a "wet" appearance, but should not have an odor or discharge.(13-14-15) also second month show most recurrence rate 18 case among 20 about 90% of recurrent cases Actually there is no big difference between type of labour in formation of granuloma or recurrence of disease after management , table 4 show recurrence rate of babies who had NVD was 16% while who born with *CIS* is 18% We found babies who came from urban area more than rural area 74 - 51 may be because most of patients in rural area went to local hospitals. anyhow, the recurrence rate in rural area is much more than urban may be because most of them come with infection of umbilical granuloma due to bad handling and use improper cleaning methods, The reasons why some children develop an umbilical granuloma are not well understood. The formation of a granuloma is related to improper tissue healing as the umbilical cord separates from the baby. It does not seem to be due to improper care of the remainder of the umbilical cord after the baby is born.(16)

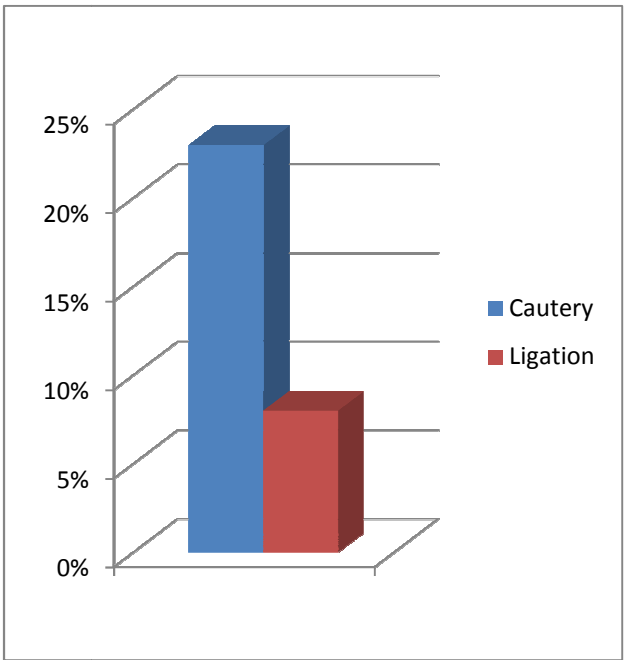
Conclusions

- Double ligation method for treatment of umbilical granuloma IS safer and less recurrence rate than cauterization method.



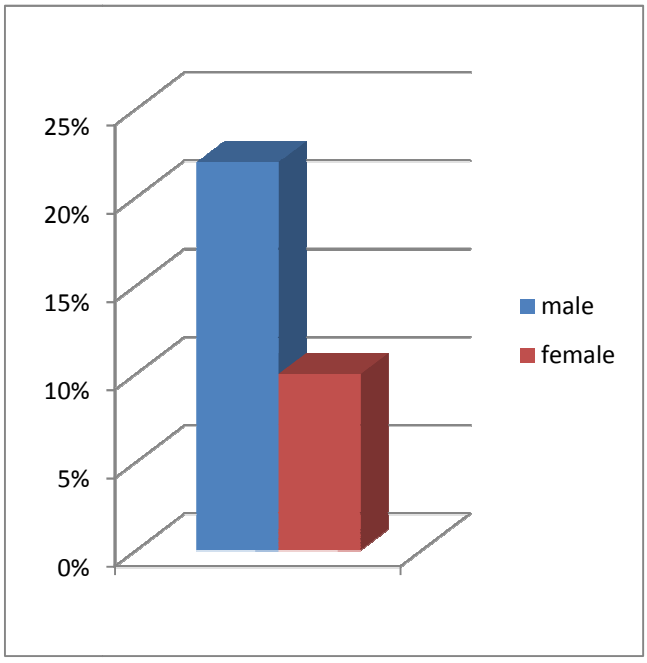
Table(1) 125 patients with umbilical granuloma treated

	No of Patients	Recurrence
Cautery	65	15 pt 23%
Ligation	60	5 pt 8%



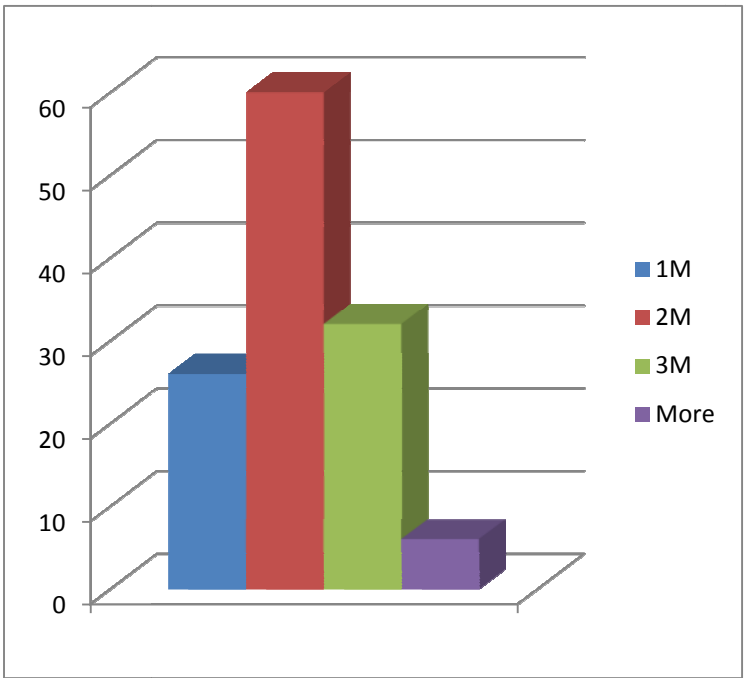
Table(2) sex distribution

	No of Patients	Recurrence
Male	64	14 (22%)
Female	61	6 (10%)



Table(3) Age distribution

Age	1 Month	2 Month	3 Month	More
Total No	26	60	32	6
Recurrence	1	18	1	0



Table(4) Type of labour

	No of Patients	Recurrence
NVD	91	14 (16%)
C/S	34	6 (18%)

Table(5) Occupation

	No of Patients	Recurrence
Urban	74	5 pt. 7.7%
Rural	61	15 pt. 32%

Table(6) Maturity

	No of Patients	Recurrence
Full term baby	107	18
Premature baby	18	2

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علاج الورم الحبيبي للسرة عند حديثي الولادة

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الخلاصة

دراسة مستقبلية أجريت على ١٢٥ طفل مصاب بورم السره الحبيبي (٦٤ طفل و ٦١ طفله) قسموا الى مجموعتين الأولى ٦٥ طفل عولجوا بطريقة الكي، والمجموعة الثانية ٦٠ طفل عولجوا بطريقة الربط المزدوج خلال الفترة من ١ كانون الثاني ٢٠٠٩ والى ٣١ كانون الأول ٢٠٠٩. لقد وجدنا أن معدل رجوع المرض بعد العلاج بطريقة الربط المزدوج (٥ أطفال أي ٨%) بينما بعد العلاج بطريقة الكي (١٥ طفلا أي ٢٣%) لذا نحن ننصح بعلاج الورم الحبيبي للسره بطريقة الربط المزدوج بدلا من الكي لأنها أكثر أمنا واقل رجوعا.

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