The outcome of electrocoagulation after dissection in thyroglossal duct cyst and fistula.

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الخلاصة

يعتبر الكيس الدرقولساني من أكثر أورام العنق الولادية شيوعا,وبسبب كونه عرضة للالتهابات الخمجيه الحادة وبدرجة اقل للتحولات السرطانية الخبيثة قد تؤدي الأساليب الجراحية الخاطئة بتكوين ما يعرفبالناسورالدرقولساني.لاتزال طريقة(سيسترنك) هي الجراحة الأنجع على الرغم من رجوع المرض بنسبة تشكل حوالي 4%.في هذه السلسلة اثنان وثلاثون مريضا مصابون وبنسب شتى من الأكياس الدرقو لسانيية البسيطة بنسبة88%, والملتهبة بنسبة6%, والنواسير بنسبة 6% , تم علاجهم جراحيا بطريقة سيسترنك مع إجراء تحوير بسيط يتمثل بكي ما تبقى من قنيوات لم يتمكن من إزالتها باستعمال المقص الجراحي.تراوحت أعمار المرضى بين 2-25سنة.لم نلحظ رجوع المرض لأي من الحالات السالفة الذكر0%.متوسط فترة متابعة المرضى 18 شهرا. 6% من المرضى أصيبوا بمضاعفات ما بعد العملية .ان استعمال الكي بعد استئصال القناة الدرقولسانية ربما يعطي أكثر ضمانا لإزالة القنيوات المتفرعة بتأثير الحرارة,مما يقلل نسبة رجوع المرض.

Abstract

Thyroglossal duct cysts are the most common forms of congeLital neck swelling .They are liable for infection &also for malignant transformation .Incorrect management of the infected cyst may end with formation of thyroglssal fistula. Sistrunk's operation is still the procedure of choice in spite of its recurrence rate about4 %.In this series 32patients underwent the conventional Sistrnk's operation with moderate modification represented by electocoagulation of the dissected plane of tissues. Twenty eight patients (88%) of the total series were presented with asymptomatic naci swelling; 6%with inflamed neck swelling; 6%with TGD fistula; they were scheduled to undergo the above surgical operation over a period of 4.5years .average age was9.125year; male: female ratiowas1.8:1

Recurrence rate was0%; the mean follow up period was 18 month, 6%of them presented with post operative complications. Electrocoagulation of the dissected plane of tissue in Sistrunk's probably offer more warranty for ablation of ductuli & thence minimize the recurrence rate.

Introduction

Persistence of thyroglossal duct(TGD) as a whole or partially results in the formation of TGD cyst and therefore may be found any where in , or adjacent to the midline from the tongue base to the thyroid isthmus. (1, 2, 3)About 65%are infra hyoid .(5,8)

TGD cysts are one of the most common pediatric midline neck lesions.(1,3) although they have been reported to be as much as 2cm from the midline and may present for the first time in adults, even as late as the sixth or sevenths decade of life (2), they usually become symptomatic in early childhood as amass or draining sinus ;

Infection and abscess formation are frequent complications due to communications between the cyst and the mouth with subsequent contamination by oral flora.(4)

In 1% of TGD cyst malignant transformation is found with predominance of papillary carcinoma (80%)(5,6), squamous carcinoma account only 5% of the cases(7). Only 2 cases concurrent papillary and squamos carcinoma have been reported so far (8, 9,10,11).

Clinical observations demonstrate that TGD fistula is very often arise following surgical interventions, fistulae especially appeared after incisions, punctures, enucleations or radiation therapy of a median cyst, these types of treatment should be avoided, the radical removal of TG abnormality being the only rational procedure(12).

Classically TGD cyst and fistula moves upwards on swallowing and notably with tongue protrusion , but this may occur with other midline cyst, such as dermoid cyst , as it merely indicates attachment to hyoid bone.

Methods

This study was conducted in Aden private hospital, Aden city, Republic of Yemen &Al-karama general hospital, kut city,Iraq . Dept. of surgery.Between December2002&May 2007, thirty two patients were managed by the author ,28patients of this series presented with asymptomatic midline neck swelling ,2patients presented with acutely inflamed midline neck swelling, &2 patients with discharging cervical fistula, their diagnosis were highly suspected on the base of clinical examination &supported by other investigations such as neck sonography &FNAC, whene it is recommended &eventually confirmed by histopathological examination of the excised specimen.

The patients' ages range between (2-25) years.The operation we usually perform for the presumed non inflamed TGD cyst starts by doing a 3cm transverse incision just over the swelling ,the skin &the platysma

were reflected ,the cyst was dissected free from the surrounding tissues up to the level of hyoid bone ,depending on many universal studies conducted through the anatomical reconstruction of the examined specimen which showed that the diameter of the TGD at the level of the cranial top of hyoid bone was 175-1400microns(13) &is branched ,multiple & widely spaced & its direct dissection is impossible ,so we resect about 1.5mmwidth &0.5mm depth of the central portion of hyoid bone with attempting every effort to follow the tract or the fistula up by dissection , followed by electro coagulation of the dissected line of the tissues up to the foramen cecum. The same maneuver is applied for the acutely inflamed TGD cyst &TGD fistula with some exceptions, where an antibiotic course administration precedes the surgical management of the inflamed cyst until the acute phase elapsed.

Concerning the TGD fistula, an insertion of a fine probe into its tract is essential step for its delineation during its dissection.

Meticulous hemostasis and saline irrigation of the operative field probably decrease the recurrence rate with closure of the wound in layers & pressure dressing application.

Results

32patients with TGD cyst &fistula were underwent sistunk's operation in a period of about 4.5years, their ages range from (2-25) year, with average 9.13.

The presentation of the patients in this series are shown in the following table:-

NO.of pt.s	Percentage%	Mean age(year)	Male: female	Mode of presentation
28	88%	9	1.8:1	Asymptomatic midline neck swelling
2	6%	5	0:1	Chronic discharging neck fistula
2	6%	15	1:0	Acutely inflamed midline neck swelling

22patiens in this series, representing 69%, were with subhyoid neck lesion & the remaining 10patients who representing 31% of the total series were with a lesion located at or just above the level of hyoid bone.

All patients underwent careful dissection of the tract/fistula below hyoid bone with resection of about 1.5mm width&0.5mm depth of central portion of hyoid bone, with offering every effort to keep the integrity of the suprahyoid part of the tract/fistula which is very of tenly branched, friable &difficult to be dissected in toto followed by elecrocoagulation of the dissected plane of tissues to enforce the ablation of the residual tract epithelium .The mean period of follow up was18 months and the recurrence rate was 0% .We have 2 patients presented one month postoperatively with a swelling just above the site of incision, which was managed by aspiration ,antibiotic administration &pressure dressing where they resolved completely by only this conservative measures .

Discussion

One of the drawbacks of the conventional Sistrunk's operation is the recurrence of the disease which might be attributed,in part, to the multiplicity of the thyroglossal tracts,sharing in that the opinion of different published universal literature,thus we think that a wide conservative excision followed by electocoagulation of the dissected plane of tissues play a role in ablation of the missed tracts & hence, minimizing the recurrence rate.

Irrigation of the operative site with saline to wash out the necrotic debris left behind electrocoagulation is probably a useful measure to reduce the rate of infection We think that the presence of inflammation at the time of surgery is an important risk factor for relapse &hence we agree with the concept which concludes that antibiotic administration for such cases would be until resolution of the acute phase of inflammation, then be followed by surgical management (14).

We have 2patients in this series who are presented one month postoperatively with a fluctuant swelling just above the site of incision without constitutional symptoms .Gross examination of the aspirated contents revealed that it resembles that of saliva .They are completely resolved by only this simple conservative measure (i.e aspiration ,antibiotic, & pressure dressing.)

We think that the gap left in Hyoglossus muscle after dissection &diathermy is probably the major cause of this problem &simple approximation of the dissected plane of tissue might prevent such spillage.

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