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Comparison of post-tonsillectomy analgesic drugs (Paracetamol, Diclofenac sodium, and Tramadol)

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Abstract

To compare the effectiveness of using paracetamol, diclofenac sodium, and tramadol in controlling post tonsillectomy pain in immediate post-operative period. Sixty patients from 10 to 30 years old undergoing tonsillectomy by classical cold steel method and homeostasis done by ligation with or without electrocauterization. We divided them into three groups according to the type of analgesic drug received in the immediate post operative period:

Group A (20 patients) received paracetamol injection 15mg/kg/dose.

Group B (20 patients) received diclofenac sodium injection 1.25mg/kg /day.

Group C (20 patients) received tramadol injection1mg/kg/dose.

Post-operative pain assessed clinically and according to visual analogue scales during rest and deglutition. 8 patients (40%) of group A have good response VAS less than 30 mm with mild discomfort, 15 patients (75%) of group B have good response and in group C 17 patients (85%) have VAS less than 30 mm with mild discomfort. There was significant difference between group B and C in comparison with group A ($p=0.039$), but there was no significant difference between group B and group C ($p >0.05$). Tramadol and diclofenac sodium are most effective in controlling post tonsillectomy pain even in those patients who have tonsillectomy with electrocauterization.

دراسة مقارنة للأدوية المسكنة المستخدمة بعد استئصال اللوزتين (باراستول، دكلوفناك الصوديوم، ترامادول

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المستخلص

إجراء مقارنة بين فعالية الأدوية (براسيتامول ، دكلوفيناك صوديوم ، ترامادول) في السيطرة على الم استاصال اللوزتين في الفترة المباشرة بعد العملية .ستون مريضا في الفئة العمرية ١٠-٣٠ سنة اجريت لهم عملية استاصال اللوزتين بالطريقة الكلاسيكية وتمت عملية ايقاف النزف بواسطة العقد مع او بدون استخدام الكوي الكهربائي . تم تقسيم المرضى الى ثلاث مجاميع حسب نوع الادوية المسكنة المستخدمة في فترة ما بعد العملية .

- مجموعة (ا) اشتملت على ٢٠ مريضا اخذوا حقن براسيتامول ١٥ملغم / كغم / جرعة.
- مجموعة (ب) اشتملت على ٢٠ مريضا اخذوا حقن دكلوفيناك الصوديوم ١.٢٥ملغم /كغم/ جرعة .
- مجموعة (ج) اشتملت على ٢٠ مريضا استلموا حقن ترامادول ١ملغم/كغم جرعة .

تم تقييم الالم سريريا بعد العملية عند الجراحة وعند البلع وطبقا للمقاييس التماثلية المرئية

- ثمانية مرضى (٤٠%) من الجموعة (أ) كان لديهم استجابة جيدة طبقا للمقاييس التماثلية المرئية وهو اقل من ٣٠ ملم مع عدم راحة.

- خمسة عشر مريضا (٧٥%) من المجموعة (ب) كان لديهم استجابة جيدة .
- سبعة عشر مريضا من المجموعة (ج) (٨٥%) كانت لديهم أستجابة اقل من ٣٠ ملم مع عدم راحة .
- كان هناك فرق معنوي بين المجموعة (ب) و (ج) بالمقارنة مع المجموعة (ا) حيث ان (P value= 0.039) ولم يكن هناك فرق معنوي بين مجموعة (ب) بالمقارنة مع مجموعة (ج) حيث كان (P>0.05).

ان الادوية المسكنة (ترامادول وصوديوم ديكلوفناك) هي الاكثر فعالية في السيطرة على الالم بعد عملية الاتنصال اللوزتين حتى في الحالات التي يستخدم فيها الكوي الكهربائي .

Introduction

Tonsillectomy is one of the most frequently performed surgical procedures.[1] Post tonsillectomy pain has a maximum intensity immediately after operation and in the first three post operative days.[2] Pain is still the most significant obstacle to the rehabilitation of a patient following tonsillectomy. Thus there is a need to achieve adequate pain control to avoid poor oral intake, which leads to lassitude, delayed recovery of strength and well being and occasionally requires overnight hospitalization in day case surgical practice[3]. Various strategies for the management of post tonsillectomy pain have been proposed like infiltration of local anesthetic[4,5], non-steroidal anti inflammatory drugs (NSAID), narcotics and oral analgesics[6].Recently, an injectable formulation of paracetamol has been introduced which solves the bioavailability issues associated with the enteral formulation and could potentially provide adequate postoperative analgesia[7]. Tramadol hydrochloride is a centrally acting analgesic agent available in oral, intramuscular, and intravenous formulation [8].

The aim of this study was to compare the efficacy of intramuscular paracetamol, diclofenac sodium i.m. and tramadol i.m. in controlling pos tonsillectomy pain.

Patients and Methods

Sixty patients from 10 to 30 years old undergoing tonsillectomy by classical cold steel method and homeostasis done by ligation with or without electrocauterization. We divided them into three groups according to the type of analgesic drug received in the immediate post operative period:

Group A (20 patients) received paracetamol injection 15mg/kg/dose every 4–6 hours, max. 60 mg/kg daily.

Group B (20 patients) received diclofenac sodium injection 1.25mg/kg /day in two divided dose. We exclude patients with allergy to aspirin, asthma and peptic ulcer.

Group C (20 patients) received tramadol injection1mg/kg/dose three times daily. Patients with excessive cauterization.

Pain was estimated in all patients by doctors and parents clinically by observing facial expression, motor activity and according to the visual analogue scales at rest and during deglutition. Visual analogue score (VAS) was assessed on a 0-100 mm scale (0 mm: no pain; 100 mm : maximum imaginable pain) two hours after the dose of analgesia. Operationally a VAS is usually a horizontal line, 100 mm in length, anchored by word descriptors at each end, as illustrated in Fig. 1.

How severe is your pain today? Place a vertical mark on the line below to indicate how bad you feel your pain is today.

No pain |_____| Very severe pain

Figure 1 Effects of the interpersonal, technical and communication skills of the nurse on the effectiveness of treatment.

Results

In group A 8 patients (40%) have good response with VAS less than 30 mm with mild discomfort during deglutition and 12 patients (60%) have VAS >30mm, difficulty in deglutition and irritability. Total number of patients have electrocauterization was 5, only one (20%) has good response.In group B 15 patients (75%) have VAS less than 30 mm with mild discomfort during deglutition and 5 patients (25%) have VAS >30mm, difficulty in deglutition and irritability. Total no. of patients have electrocauterization was 10, five 50% have good response. In group C 17 patients (85%) have VAS less than 30 mm with mild discomfort during deglutition and 3 patients15% have VAS>30mm difficulty in deglutition and irritability. Total no. of patients have electrocauterization was 15, thirteen 86.6% have good response.

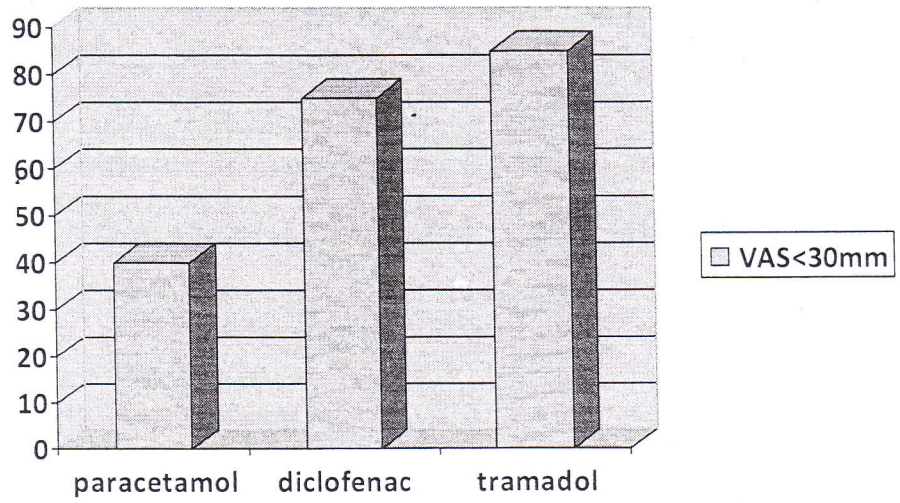

Fig.(2):- show patients percent with good response to analgesic drugs.

There was no statistically significant difference between group B and C (p value >0.05), but there was statistically significant difference between group A, B and C (p value=0.039).

Discussion

Despite the use of various types of analgesics, the recovery period after a tonsillectomy can be quite painful. Not only

does this surgery cause distress, it also causes difficulty with eating, which delays postoperative recovery. Adequate analgesia is necessary to relieve the agony of pain and reduce incidence of bleeding since increased vascular congestion of the head and neck associated with crying may precipitate bleeding [9]. In our study there was no significant difference between i.m diclofenac and i.m tramadol which agree with *Mark J. Courtney and Dilhan Cabraal,* pain scores for the 14 days were not significantly different between the oral tramadol and oral diclofenac groups [10].while, *Antila H,et al* show that the VAS scores for pain were significantly lower in ketoprofen group compared with tramadol (P = 0.044) [11].There was significant statistical difference between i.m diclofenac and i.m tramadol in comparison with i.m paracetamol which disagree with the *Hiller A, et al,* no statistically significant differences were found between monotherapy and combined treatment with i.v paracetamol and diclofenac with respect to postoperative analgesia[12].

Conclusion

Our results showed that immediate posttonsillectomy pain control with tramadol or diclofenac are superior to injectable paracetamol even in those patients who have tonsillectomy with electrocauterization.

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