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Caudal anaesthesia in the clinical assessment of painful anal lesions

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Summary

The clinical evaluation of patients who present with painful anal conditions is often incomplete because of the need to avoid distress that digital examination engenders. Diagnosis is then based on the history and other findings on clinical examination. This is associated with a risk of missed and delayed diagnosis, delay in the initiation of appropriate therapy and the use of alternative investigation modalities which may not be necessary if full clinical evaluation had been done. In this communication, the experience with the use of caudal anaesthesia in the outpatient and ward setting to evaluate painful anal conditions is presented. The result shows that the technique is safe, and allows the immediate and complete evaluation of these conditions. The anaesthesia is short lasting and no morbidity was observed in this study.

Keywords: Caudal anaesthesia, anal, pain

Résumé

L'évaluation clinique des patients que présentent des condition anale douloureuses. Est de plus souvent incomplete a cause du lésion d'éviter la detresse que l'examen digitale cause. Le diagnostic est basé sur l'histoire et d'autres observation pendant l'examen clinique. Ceci est associé un risque de diagnostic retardé on rate, ainsi que le retard dans l'initiation de la therapy appropriée. Dans cette communication, l'initiation de l'anesthésie caudal dans la clinique générale et dans les salles d'hospitalisation dans l'évaluation des condition anales douloureuse est ici présentée. Les résultats ont montré que cette technique est sans danger et permettent l'évaluation immédiate et complète de cette condition. L'anesthésie est courte et il n'y avait pas de morbidité associées dans cette étude.

Introduction

Painful anal lesions are common yet clinical evaluation is often inconclusive because of the need to avoid the distress engendered by digital examination of the anus and rectum. Standard textbooks of surgery advise that this aspect of the clinical examination should be avoided if patient feels too much pain [1]. Diagnosis is then based on the history and the rest of the clinical examination with the result that this often leads to incomplete clinical evaluation of the patient, with missed and or delayed diagnosis, and delay in the initiation of appropriate treatment. The patient may also need to be subjected to other investigations such as examination under anaesthesia before diagnosis is made. In certain situations, examination after topical application of local anaesthetic agent may be possible but thorough examination in most of these conditions often requires a general anaesthesia.

The similarity in the clinical features of perianal conditions, the cost and potential complications of alternative methods of evaluation, the delay that may result from this approach, coupled with increased patient anxiety argue for a safe and satisfactory method of assessing these patients clinically.

Caudal anaesthesia is an established technique that provides safe and satisfactory epidural blockage of the *cauda equina* and it has been used in a variety of adult and paediatric procedures with minimal morbidity [2,5] Its application in the outpatient and ward setting for the evaluation of perianal lesions has however not been previously documented. This study reports on the experience with the use of caudal anaesthesia in the clinical evaluation of painful peri-anal conditions.

Materials and methods

All consecutive patients with complaints of painful anal lesions seen in the Surgical Oncology Unit of the University College Hospital, Ibadan, Oyo State, Nigeria between January 1995 to June 1998 were prospectively recruited into the study.

Informed consent was obtained after the procedure had been explained to the patients. Caudal anaesthesia was given according to the standard technique [2] modified by using 10-mL hypodermic syringe and 21 G needle as previously described [5]. Plain 1% lignocaine solution at a dose of 2 mg/kg body weight was used. A trolley containing the basic requirements for cardio-pulmonary resuscitation was always provided at the time of the procedure and the patients were monitored during the procedure by clinical assessment of state of consciousness, quarter-hourly blood pressure and pulse rate measurements.

Parameters measured are the success rate and complications of the procedure. Anaesthetic latency period was measured as the time from injection of the local anaesthetic agent to the time when the patient reports complete relief of the peri-anal pain complemented by pinprick testing of the "saddle-area" for pain. Duration of anaesthesia and motor blockade were not consistently monitored.

Results

Overall, 33 patients presented with painful peri-anal conditions during the period of the study and their diagnosis is shown in Table 1. Of these patients, a rectal examination could not be concluded in 18 (55%) of the patients because of intolerable pain.

In this group of eighteen patients, there were 7 males, and 11 females. Their ages ranged from 32 to 83 years with a mean of 57 years. The diagnosis in these patients is also shown in Table 1. Caudal anaesthesia was performed in this group of patients and anaesthesia obtained in 17 (94.4%) of the cases after a first attempt while the procedure was successful at the second attempt, after an interval of 1 hour in the remaining one patient.

The mean (SD) anaesthetic latency period was 13.7 (2.1) minutes. Rectal examination proceeded uneventfully in all these patients except that it was not possible to assess the tone of the anal sphincter because of the anaesthesia. Two patients, both with *fissure in ano*, complained of incontinence of faeces within an hour of the onset of the anaesthesia but this recovered spontaneously once the anaesthetic wore off.

An initial diagnosis of *fissure in ano* was revised to anal carcinoma in one patient while biopsy of the anal lesion was possible in three cases of squamous cell carcinoma of the anus and six cases of advanced rectal carcinoma infiltrating the anus without distress to the patients.

Table 1: Diagnosis of all consecutive patients seen and those who were examined under caudal block

No.	Diagnosis	Number of cases	Number examined under caudal
1.	Perianal abscesses (including temporary closed fistulae)	8	2
2.	Perianal hematoma	2	-
3.	Thrombosed prolapsed Hemorrhoids	5	2
4.	Radiation proctitis	4	4
5.	Anal carcinoma	3	3
6.	Rectal carcinoma infiltrating the anus	6	6
7.	Pelvic abscess	1	1
8.	Fissure in ano	4	-
	TOTAL	33	18

Discussion

Caudal anaesthesia was first described in 1901 but its use has been limited because of fear of low success rate and complications. While it has continued to be used in paediatric surgery [3], its potential has gone largely unrealized in other disciplines [4]. Several recent studies have demonstrated its safety and high rate of successful anaesthesia [3,5], coupled with its low cost and minimal requirements for equipments.

Evaluation of patients with painful anal conditions is usually limited by the distress that digital examination causes [1]. The clinician then relies on the history and the rest of findings on clinical examination to make a diagnosis. Where considered particularly important, examination under general anaesthesia is recommended with predictable impact on the cost and ease of care. Failure to undertake a thorough clinical examination may lead to delayed and or missed diagnosis. In order to ensure as complete a clinical assessment as possible, the role of caudal anaesthesia in this situation was investigated. The data shows that this is a reliable

technique that is associated with minimal morbidity and can be done as an outpatient procedure.

The technique led to revision of the diagnosis in one of our patients and permitted the outpatient performance of biopsy, which would otherwise have required ward admission and general anaesthesia. The importance of careful technique can not be over-emphasized as the technique has some potential complications but these can be avoided by adherence to the standard techniques [2,5,7].

The dose of anaesthetic and the choice of agent used in this study has been previously evaluated and found to be safe and adequate for the production of anaesthesia of short duration [5]. This short duration is however sufficient for the procedures that were carried out. The dose and concentration of anaesthetic used resulted in a relatively long latency period but this disadvantage increased the therapeutic index of the agent and allowed the possibility of repeating the procedure should an initial attempt fail, without the risk of approaching the toxic dose of the anaesthetic agent.

While we acknowledge that there is a learning curve, the technique is easy to learn [6,7] and the benefit to the patient in promptness of diagnosis, avoidance of repeated visits, avoidance of general anaesthesia, and improved diagnostic accuracy outweigh the risks.

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