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Characteristics and Clinical Management of Female Patients with Fissure in Ano in Al-Kadhimiya City, Baghdad

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Abstract

Background Fissure in ano is a common painful anal problem in female patients.

Objective To study the sociodemographic variables of female patients with fissure in ano, and to identified the characteristic of anal fissure and their treatment among those patient in Al-Imamian Al-Kadhimiyian Medical City and two private hospitals.

Methods This is a prospective study that was carried out from May 2008 to May 2011. Two hundred fifty female patients with fissure in ano were interviewed regarding their age, marital state, address, level of education, clinical presentation and the subsequent management.

Result The commonest age of presentation in females was between 21-30 years. 78% of them were living at the peripheral areas of north of Baghdad, and 79.6% were of low level of education (primary school or below). The prevalence was found more in women with high parity especially when their child delivery was supervised by a midwife in their location. All patient has presented with anal pain, 55% were associated with bleeding per rectum and 64.2% with constipation. The location of fissures was 51.6% anterior, 48% posterior, 0.4% lateral in position. Less than half of patients underwent a surgical treatment. 77% of them were treated by lord dilatation under anesthesia and 23% by lateral sphinecteromty.

Conclusion Factors which had an impact on the clinical course and management of fissure in ano in female patients were found to be the social status, the level of education and the parity, therefore to prevent this illness, a cooperation between the heath services and the family health center and the government is necessary in order to overcome such a common problem.

Keywords Fissure in ano, Female

Introduction

Fissure in ano is a tear in the anoderm distal to the dentate line. The pathophysiology of the anal fissure is thought to be related to a trauma from either the passage of a hard stool or a prolonged diarrhea. A tear in the anoderm causes spasm of the internal anal sphincter which results in pain, increased tearing, and decreased blood supply to the anoderm. This cycle of pain, spasm, and ischemia contributes to development of a poorly healing wound that becomes a chronic fissure. The vast majority of anal fissures occur in the posterior midline, 10-15% occurs in the anterior midline and Less than 1% of fissures occur off midline [(1)].

The posterior anal canal is the most poorly perfused part of the anal canal. The delicate blood supply is further compromised, thus rending the posterior midline of the anal canal relatively ischemic. The fissure is just a tear in the anal mucosa and is defined as an acute anal

fissure. If the fissure persists over time; it progresses to chronic fissure that can be distinguished by its classic features. The fibers of internal anal sphincter are visible in the base of the chronic fissure and often an enlarged anal skin tag is present distal to the fissure and hypertrophied anal papilla are present in the anal canal proximal to the fissure [2]. The diagnosis is secured by the typical history of pain and bleeding with defecation, especially if associated with prior constipation and confirmed by inspection after gently parting the posterior anus. Digital as well as proctoscopic examination may trigger severe pain, interfering with the ability to visualize the ulcer. An endoscopic examination should be performed, but it can be delayed 4 to 6 weeks, until the pain is resolved with medical management or until surgery is performed for those cases refractory to medical therapy [3]. Local application of medications to relax the sphincter muscle, thus allowing the healing to proceed, was first proposed in 1994 with nitroglycerine ointment [4-7], and then calcium channel blockers in 1999 with nifedipine ointment [8,9], and the following year with topical diltiazem [10]. Branded preparations are now available of topical nitroglycerine ointment (Rectogesic (Rectiv) as 0.2% in Australia and 0.4% in UK and US) [11], topical nifedipine 0.3% with lidocaine 1.5% ointment (Antrolin in Italy since April 2004) and diltiazem 2% (Anoheal in UK, although still in Phase III development). A common side effect drawback of nitroglycerine ointment is headache, caused by systemic absorption of the drug, which limits patient acceptability.

A combined surgical and pharmacological treatment, administered by colorectal surgeons, is direct injection of botulinum toxin (Botox) into the anal sphincter to relax it. This treatment was first investigated in 1993. However it must be noted that, in many cases involving Botox injections the patients eventually had to choose another cure as the injections proved less and less potent, spending thousands of dollars in the meantime for a partial cure. Lateral sphincterotomy is the Gold Standard for curing this affliction [12]. Combination of medical therapies may offer up to 98% cure rates [13].

Surgical procedures are generally reserved for people with anal fissure who have tried medical therapy for at least one to three months and have not healed. It is not the first option in treatment.

The main concern with surgery is the development of anal incontinence. Anal incontinence can include inability to control gas, mild fecal soiling, or loss of solid stool. Some degree of incontinence can occur in up to 45 percent of patients in the immediate surgical recovery period. However, incontinence is rarely permanent and is usually mild. The risk should be discussed between the surgeon and patient.

Surgical treatment, under general anesthesia, was either anal stretch (Lord's operation) or lateral sphincterotomy where the internal anal sphincter muscle is incised. Both operations aim to decrease sphincter spasm and thereby restore normal blood supply to the anal mucosa. Surgical operations involve a general anesthetic and can be painful postoperatively. Anal stretch is also associated with anal incontinence in a small proportion of cases and thus sphincterotomy is the operation of choice [14].

Methods

This prospective study has been done for evaluation of 250 female patients with fissure in ano attending three hospitals in Baghdad: the general surgery clinic Al-Imamian Al-Kadhimiyian Medical City, Al-Thurgham Private Hospital and Al-Kadhimiya Private Hospital from May 2008 to May 2011. All of them were diagnosed clinically by taking a complete history and physical examination. The history included: patient's age, marital state, numbers of child births, the address, the occupation, type of fissure in ano and its location.

Results

One hundred (40%) female patients were aged between 21 and 30 year. The age range was 1 to 51 years. The highest percentage of women was married (76.8%). The highest percentage of

patient came from the periphery of Al-Kadhimiya (rural area) (78%), while the rest comes from Al-Kadhimiya city itself. The highest rate of patients was of low level of education (79.6%) while the rest were of high level of education (21.4%).

14.7% of cases were female who had delivered 1-3 children, 52.1% of cases had delivered 4-6 children while 33.2 % of patients had more than 6 children for last delivery.

About three quarters (73.6%) of cases had their child delivery at home (by a midwife) while only (26.4%) had delivered at hospital as shown in (Table 1).

Table 1. Demographic criteria

Criteria		N (%)
Age (years)	1 - 10	14 (5.6%)
	11 - 20	18 (7.2%)
	21 - 30	100 (40%)
	31 - 40	65 (25.4%)
	41 - 50	30 (12.4%)
	60	23 (9.4%)
Marital status	Married	192 (76.8%)
	Non – married	58 (23.2%)
Parity	1 - 3 children	28 (14.7%)
	4 - 6 children	99 (52.1%)
	6 children	63 (33.2%)
Place of delivery	Home	140 (73.6%)
	Hospital	50 (26.4%)
Educational status	Low education*	199 (79.6%)
	High education**	51 (21.4%)

* = primary school or below, ** = secondary school or above

The highest rate of patient suffered from fissure in ano for more than 5 years without seeking medical advice. The most common presenting symptoms is anal pain (100%), followed by constipation (64%), bleeding per rectum (55.2%), and abdominal pain (30.8 %).

During the local examination of all cases, it was found that fissure in ano was in an anterior location in (51.6%) of cases. The clinical type of fissure in ano was found chronic in (72%) of cases. Regarding the type of treatment; conservative treatment was used for the acute fissure (48%). For the chronic stage (52%) a surgical treatment was usually required, of these, (77%) had undergone lord dilatation under anesthesia while in (23%) of the surgically treated cases lateral internal sphinecterotomy was necessary as shown in (Table 3).

Table 2. Anal fissure clinical criteria

Criteria		N (%)
Duration	< 1 year	71 (28.4%)
	1 - 5 year	119 (47.6%)
	> 5 years	60 (24%)
Associated symptoms	Anal pain	250 (100%)
	Constipation	160 (64.2%)
	Bleeding Per-rectum	138 (55%)
	Abdominal Pain	77 (30.6%)
	Abdominal Distension	44 (9%)
Location of fissure	Anterior	129 (51.6%)
	Posterior	120 (48%)
	Lateral	1 (0.4%)
Fissure type	Acute	70 (28%)
	Chronic	180 (72%)
Treatment	Conservative	120 (48%)
	Surgical	130 (52%)
	Lord dilatation	100
	LIS	30

LAS = Lateral internal sphincterotomy

Discussion

Fissure in ano is a common painful anal problem affects females, more than males. The commonest age group, in this study, was between 21-30 year while in other studies that were done in Europe and USA, it was between 40-60 years of age [15,16,17]. This may be due to early marriage in our country.

The majority of cases (78%) of anal fissure were in females living in rural area. The same result was found in a study done in India, while in a study done in UK, the incidence was much different between the Urban and the rural areas [18,19,20].

The number of patient's children (parity) was found closely related to the prevalence of anal fissure in this study. In a study done in UK, the majority cases of fissure in ano occurred in the first and second delivery [21,22,23].

Delivery at home by a midwife is associated with a high rate of anal fissure (73.6%) which was also

higher than in other study done in Europe (52%) [24,16].

The social culture has great impact on the chronicity of the anal fissure in our society. Females are unlikely to consult a doctor during early appearance of the symptom. (47.6%) of cases had visited the doctor only after one year after symptoms appearance while (24%) after five years. In a study in Europe, (95%) of cases has visited their general practitioner in the earliest appearance of the symptoms, while only (0.1%) of cases did so after one year [25,26].

Anal pain was the commonest symptom in all cases, constipation (64%), bleeding per rectum (55.2%). This was similar when compared with a study result in Europe [27,28].

(51.6%) were anteriorly located fissures, (48%) posteriorly while (0.4%) were lateral. While in a study, (90%) were posteriorly and (10%) were interiorly located fissures [29].

In conclusions, many factors contribute to the occurrence of anal fissure among females such as social, educational and place of delivery. In order to overcome such problem, it is recommended to increase social awareness about such illness by health education through mass media especially for females during antennal care with emphasis on those with low education status from rural area. To provide good training for the midwives regarding safe measures during delivery of fetus to avoid development of anal fissure in the future.

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