SALPINGITIS ISTHMICA NODOSA: REVIEW OF FOUR CASES FROM THE GENERAL HOSPITAL, KOTA BHARU

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ABSTRACT

Four cases of salpingitis isthmica nodosa diagnosed from a total of 82 hysterosalpingograms, over a period of three years at the General Hospital, Kota Bharu, were reviewed. The diagnosis was made based on the radiographic appearance of globules of contrast medium in the periluminal tissues which were in continuity with the lumen of the fallopian tubes. Three of these patients had ectopic pregnancy. Diagnosis of salpingitis isthmica nodosa which is readily demonstrated by hysterosalpingogram, is extremely important because of its impact on ectopic pregnancy rates. Hysterosalpingography is indicated following ectopic pregnancy to show whether there is diverticulosis of the contralateral tube. By such knowledge, optimal treatment can be offered to patients wishing to attempt further conception. As the disease is relatively localised it is amenable to resection with reimplantation of the distal portion of the tube.

Keywords: *salpingitis isthmica nodosa, hysterosalpingogram, tubal diverticulosis, ectopic pregnancy, fallopian tubes.*

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INTRODUCTION

Salpingitis isthmica nodosa (SIN) is a rare condition involving the fallopian tubes. It is characterised radiologically by small diverticula extending from the lumen into the wall, usually involving the isthmus. It was originally described by Chiari in 1887. He observed epithelial inclusions within the tubal walls in six patients. The entity can be diagnosed reliably by hysterosalpingography (HSG)[1,2]. It is important to diagnose this condition because of its association with increased incidence of inferility and ectopic pregnancy[3-6]. SIN was present in as many as 57% of the tubes in one series of 100 fallopian tubes from tubal pregnancy specimens[6]. Four cases of SIN diagnosed at the General Hospital, Kota Bharu, over a three-year period, were reviewed. In addition, an overview of the literature is presented. The association of SIN with increased incidence of ectopic pregnancy is highlighted.

MATERIALS AND METHODS

Eighty-two consecutive HSG done at the General Hospital, Kota Bharu, from January 1989 to December 1991, were reviewed. Forty-four of these were done for primary infertility, thirty-four for secondary infertility and four for recurrent abortion. The following criterion was used to diagnose SIN: globules of contrast medium in the periluminal tissues which are in continuity with the lumen of the fallopian tubes[1]. The medical records of those patients who met the criterion were reviewed. For each patient the following were recorded:

(a) Clinical data: age at time of HSG, presenting complaint, past history, duration of marriage, number of children, follow-up.
(b) Operative findings: laparotomy or laparoscopy findings.
(c) HSG findings.

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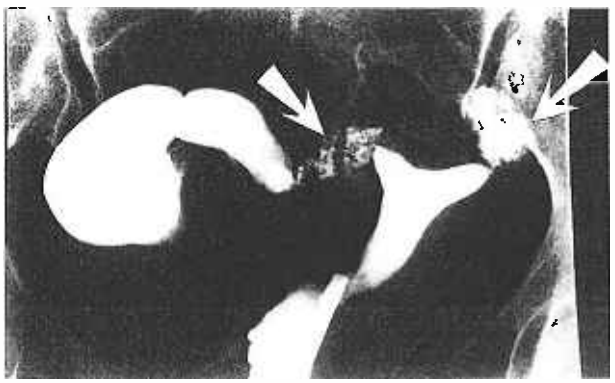
Fig 1 – Hysterosalpingogram of patient number two. Bilateral tubal diverticulosis noted (arrows). Left salpingectomy done for tubal pregnancy. Right hydrosalpinx seen



RESULTS

Four patients met the criterion for the diagnosis of SIN.

1. Clinical data (Table I)
   All of them presented with infertility, two with primary infertility and the other two with secondary infertility. Two patients had ectopic pregnancy before HSG and another had it a year after the HSG.

Table I – Clinical data

Patient	Age at time of HSG (years)	Presenting complaint	Past history	Duration of marriage (years)
1	36	secondary infertility	ectopic pregnancy	20
2	36	secondary infertility	ectopic pregnancy	17
3*	20	primary infertility	–	4
4	26	primary infertility	–	8

*This patient developed ectopic pregnancy a year after HSG.
None of the patients had any child.

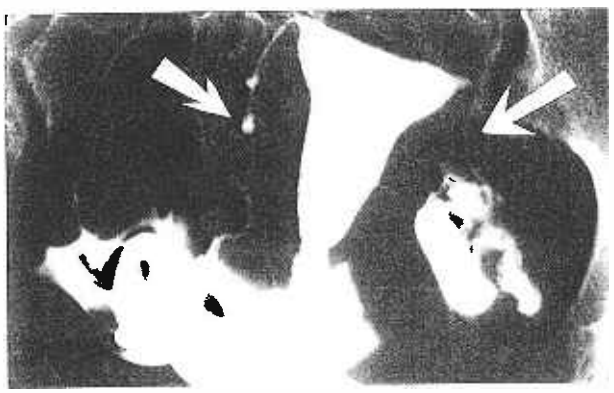
2. Operative findings
Three patients had evidence of chronic pelvic inflammatory disease at laparotomy while the last patient had evidence of the same at laparoscopy.

3. HSG findings (Table II)
In one patient the tubal diverticulosis was unilateral; the other tube in this patient was occluded at the cornua. In all the other patients the condition was bilateral. In the two patients who had salpingectomy before HSG the stumps were involved while in the other tubes the medial one-third were involved.

Table II - HSG findings

Patient No.	Location of SIN	Fallopian tubes	Illustration
1	bilateral R-stump L-medial 1/3	R-salpingectomy L-blocked at isthmus	
2	bilateral L-stump R-medial 1/3	L-salpingectomy R-hydrosalpinx	Fig 1
3	bilateral R-medial 1/3 L-medial 1/3	R-free spill L-loculated spill	Fig 2
4	unilateral L-medial 1/3	R-blocked at cornua L-hydrosalpinx	

Fig 2 – Hysterosalpingogram of patient number three. Bilateral tubal diverticulosis noted (arrows). Right tube is patent with free flow while the left tube shows loculated spill. This patient developed tubal pregnancy (right) a year after the HSG.



DISCUSSION

Troell (1970) examined 4,360 HSG and found fifty patients with tubal diverticulosis (1.1%)[7]. Creasy et al (1985) reviewed 1,194 HSG and identified forty-five patients with SIN (3.8%)[8]. There was a high rate of primary infertility (37.5%). In the present study four patients were found to have SIN from the eighty-two consecutive HSG reviewed (4.9%). All four patients presented with infertility, two with primary and the other two with secondary.

The exact aetiology of SIN is not known. Chiari who originally described the condition in 1887 postulated that salpingitis was the cause. Since then there has been much debate over the aetiology and pathogenesis. Some reports suggest that SIN is a primary non-inflammatory process similar to adenomyosis of the uterus and diverticulosis of other organs[2,9]. However, it is recognised that infection is a common occurrence. The condition is either a direct consequence of infection or that, once present, it predisposes the patient to subsequent infections[8]. In this study, all the four patients had evidence of chronic inflammatory disease of the pelvis with adhesions.

Persaud (1970) reported that diverticulosis was present in 49% of a series of 100 fallopian tubes removed at operation for ectopic pregnancy. The pregnancy had occurred in the area of diverticulosis in 98% of these and was demonstrated within the diverticulum in 4%. Majmunder et al (1983) detected evidence of SIN in 57% of fallopian tubes from tubal pregnancy specimens. This is the highest reported association of SIN with tubal pregnancy. Two of the patients reviewed in this paper had ectopic pregnancy before the HSG and one more patient developed ectopic pregnancy a year after the HSG.

The diagnosis of SIN which can be readily made by HSG, is extremely important because of its impact on ectopic pregnancy rates. By such knowledge, optimal treatment and counselling can be offered to these patients. HSG should be recommended after ectopic pregnancy if the patient wishes to attempt further conception. This is to show whether there is diverticulosis of the contralateral tube [2,8,10]. The relatively localised nature of the disease in many cases may make it amenable to resection with reimplantation of the distal portion of the tube[2].

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