
ESILES

RESULTS

Two hundred patients were included in this study. All had diagnostic hysteroscopic examination 4-6 weeks after curettage for first trimester spontaneous abortion. During hysteroscopy CO2 was used as the medium for uterine distention.

The age of studied cases ranged from 18- 41 years with a mean of 29.7 years ±1.24.

Table (1) shows the hysteroscopic findings in the 200 cases examined. In 154 cases (77%) no uterine pathology could be detected. In 46 cases (23%) a uterine pathology was detected. IUAS were found in 34 cases (17%) (IUAs alone in 30 cases and combined with other pathologies in 4 cases). Remnants of conception were still present in 8 cases (4%) (2 of which, remnants were combined with IUAs). Four cases (2%) showed submucous fibroids (in one case IUAs were associated). Three cases (1.5%) showed endometrial polyps (in one case IUAs were associated). Only one case (1/2%) of septate uterus was detected.

Table (2) illustrates the extent of IUAs graded according to the classification of March and Israel (1978). A number of 31 cases (15.5%) were found with *mild IUAs* (with thin or filmy adhesions involving less than one fourth of the uterine cavity and with both osteal areas not involved or clear). Only 3 cases (1.5%) were

found with *moderate IUAs* (with no agglutination of walls but only adhesions, involving less than three fourths of the uterine cavity and with upper fundus partially involved). We could not detect any case with *severe IUAs* (that involve more than three fourths of the uterine cavity or with agglutination of the walls or with complete obliteration of the upper cavity and osteal areas).

Table (3) illustrates the relation between the number of abortions and the rate of affection with IUAs. Among 127who suffered only one abortion 15 cases (11.8%) of IUAs were found. Among 48 cases that suffered two abortions 11 cases (22.9%) were found. And among 25 cases who suffered 3 or more abortions 8 cases (32%) with IUAs were found.

Table (4) illustrates the relation between the number of abortions the patient suffered and the degree of uterine cavity affection by IUAs. After only one abortion all patients with IUAs were of a mild degree. After two abortions 10 cases showed mild IUAs and one case (2.1%) showed moderate IUAs. After3 abortions or more 6 cases (24%) showed mild IUAs and two cases (8%) showed mild IUAs.

Table (1) Hysteroscopic findings after curettage for spontaneous first-trimester abortion.

Finding	No. of cases	percentage
No abnormal findings	154	77%
Intrauterin		
Remnants of conception	6	3 %
Submucous fibroids	3	1.5 %
Polyps	2	1 %
Congenital malformations (septate uterus)	1	0.5 %
*Total		

N.B.: **A combination of IUAs with other pathology was found in 4 cases: -

2 cases: IUAs + remnants of conception.
1 case: IUAs + submucous fibroids.
1 case: IUAs + endometrial polyp.

Table (2) the extent of intrauterine adhesions after curettage for spontaneous first trimester abortion.

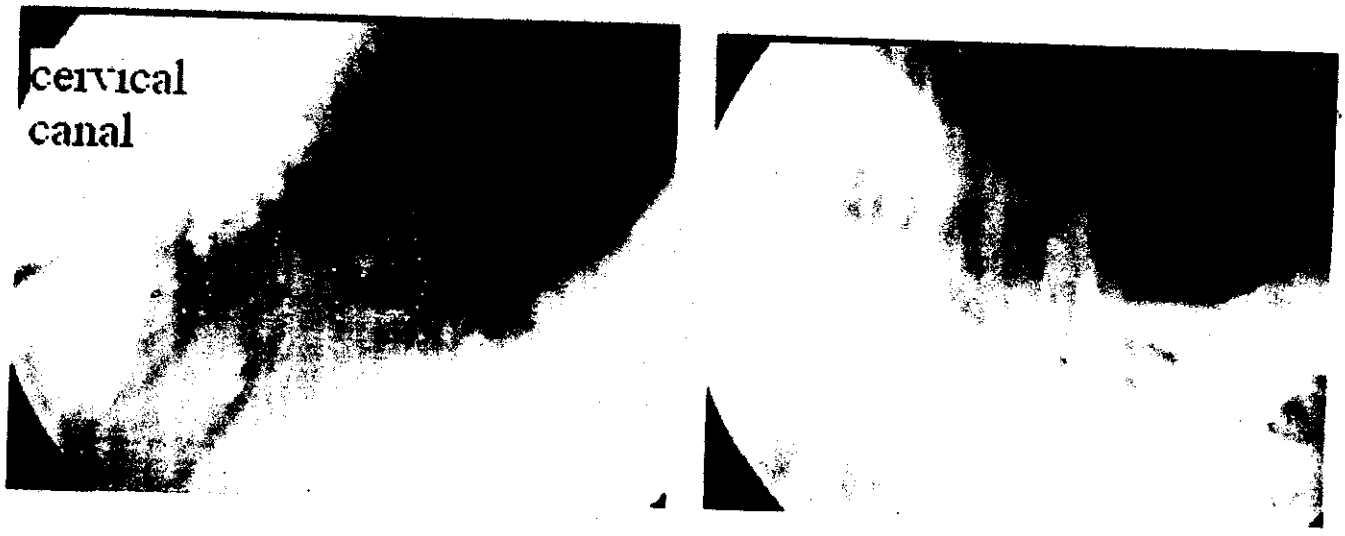
Grade		
Mild	31	15.5%
Moderate	3	1.5%
Severe	0	0%
Total	34	17%

Table (3) the relation between the number of abortions and the rate of affection with intrauterine adhesions (IUAs).

No. of abortions	*No. of patients*	*No. of cases with IUAs*	*Percentage*
1	127	15	11.8%
2	48	11	22.9%
3 or more			%

Table (4) the relation between the number of abortions and the severity of intrauterine adhesions (IUAs).

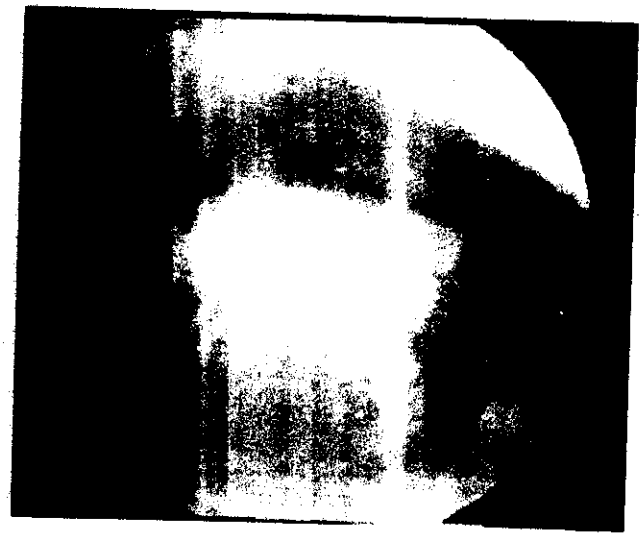
No. of abortions				IUAs
1 (127cases)	15 (11.8%)	0	0	112 (88.2%)
2 (48cases)	10 (20.8%)	1 (2.1%)	0	37 (77.1%)
3 or more (25cases)	6 (24%)	2 (8%)	0	17 (68%)



Figures (1&2) normal cervical canal.

Figure (3) internal cervical os.

Figure (4) endocervix.



Figures (5 & 6) normal uterine cavity.

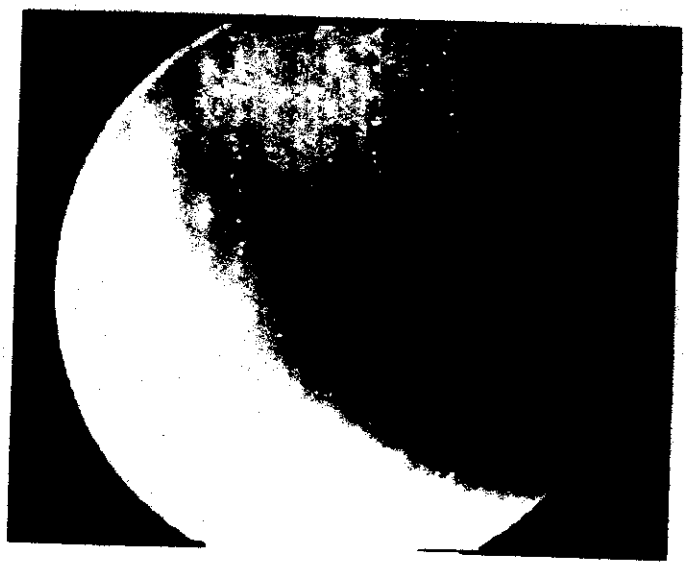


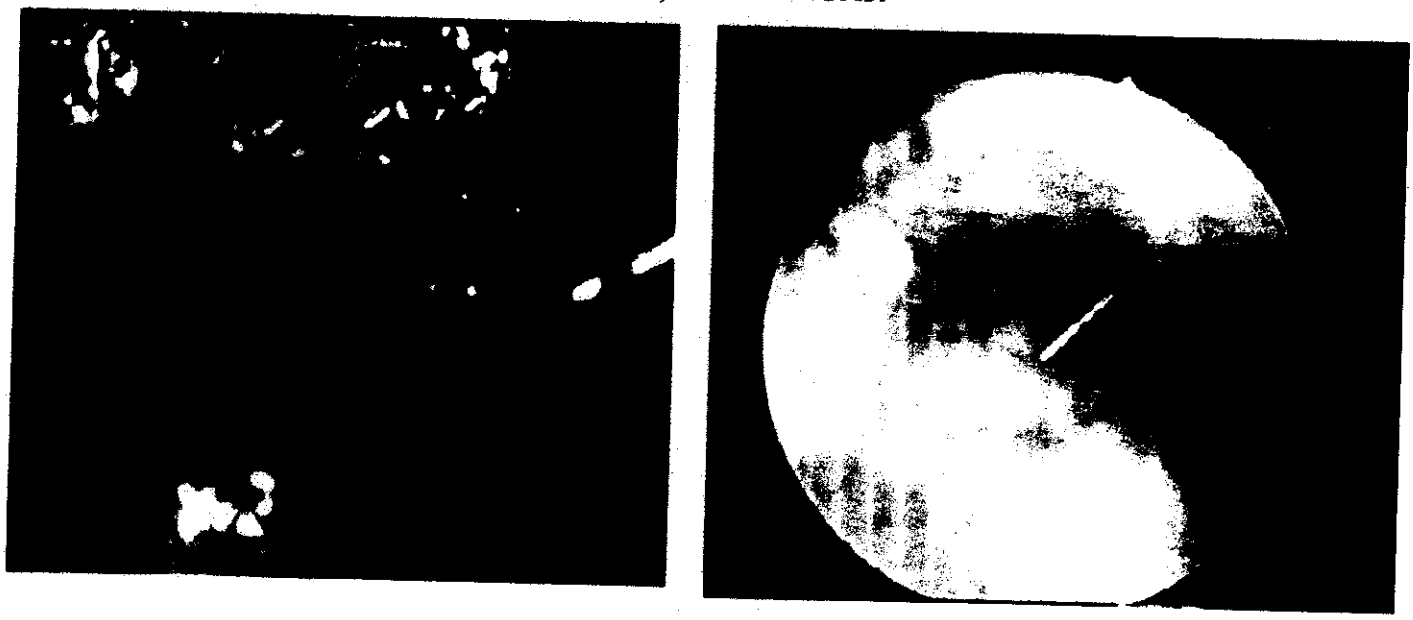
Figure (7) lt. Uterine cornu.

Figure (8) mild IUAs.

Figures (9& 10) mild IUAs.

Figures (11 & 12) mild IUAs.

Figures (13& 14) moderate IUAs.



Figures (15& 16) intrauterine adhesion bands

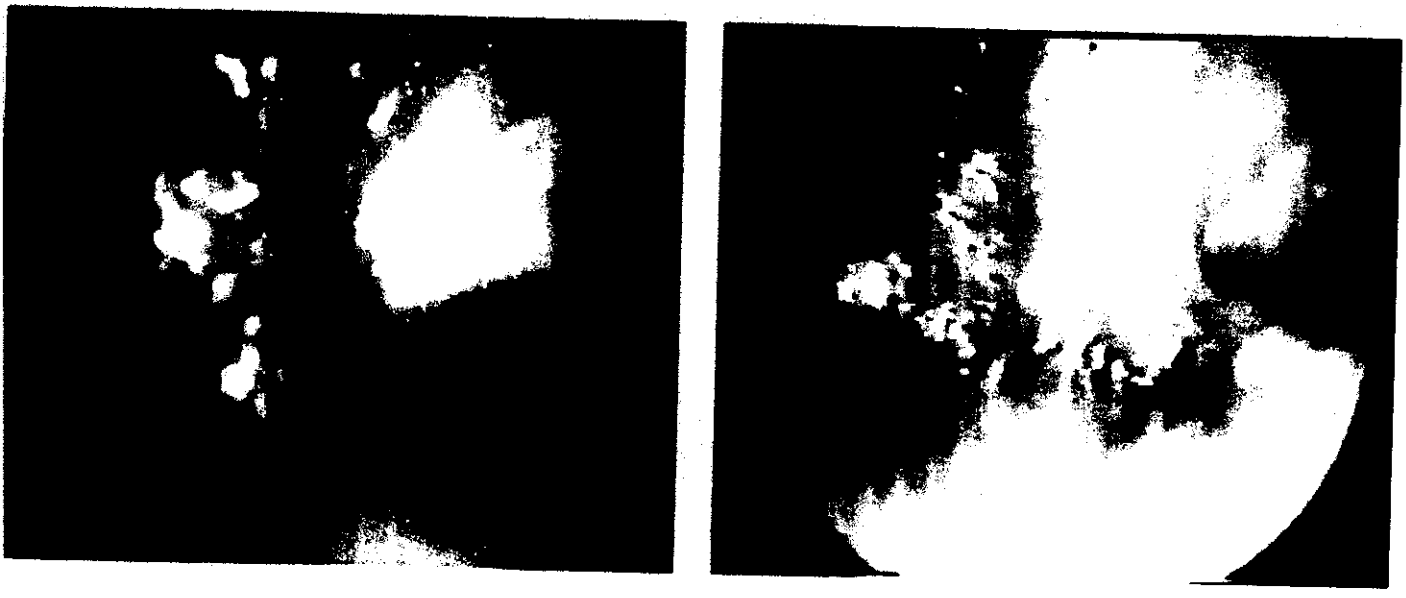


Figure (17 & 18) mild intrauterine adhesions

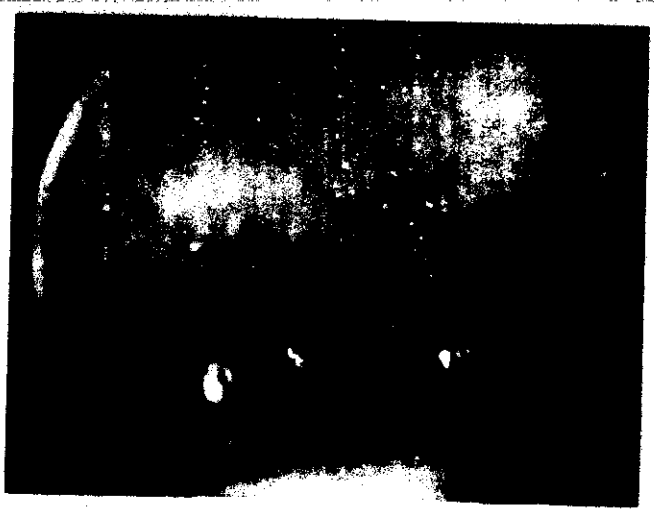


Figure (19) moderate IUAs.

Figure (20) IUA. Band.

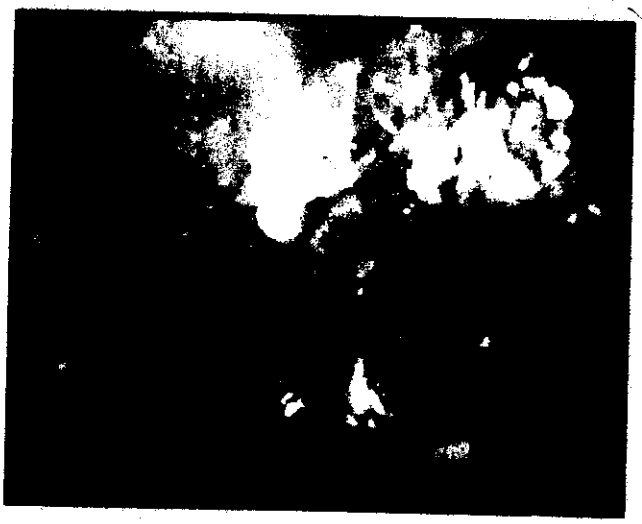


Figure (21) moderate IUAs.

Figure (22) filmy IUAs.

Figure (23& 24) mild intra-uterine adhesions.

Figure (25& 26) combinations of submucos fibroids & IUAs.

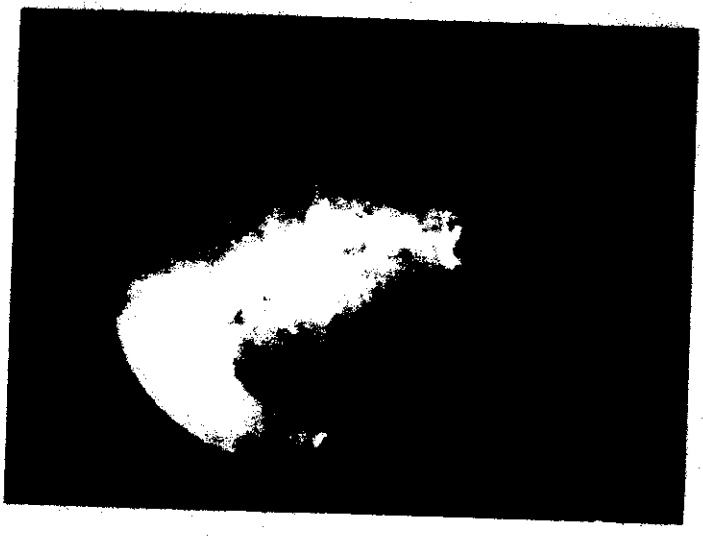


Figure (27) endometrial polyp.

Figure (28) a submucous fibroid

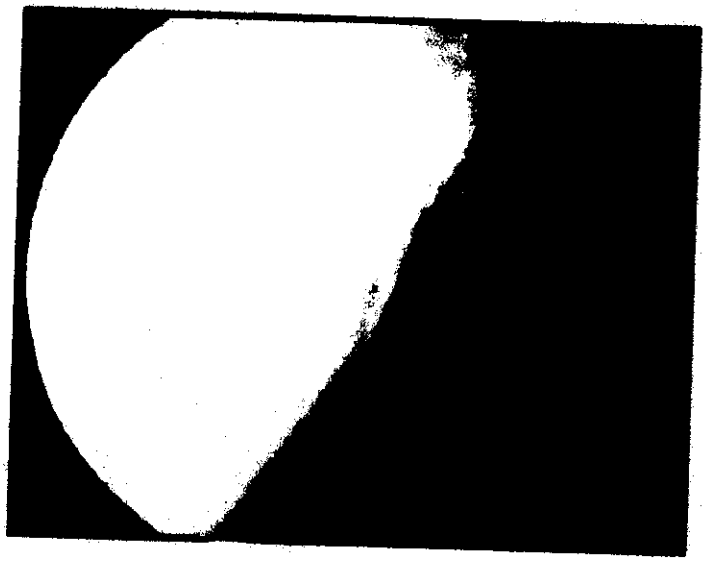
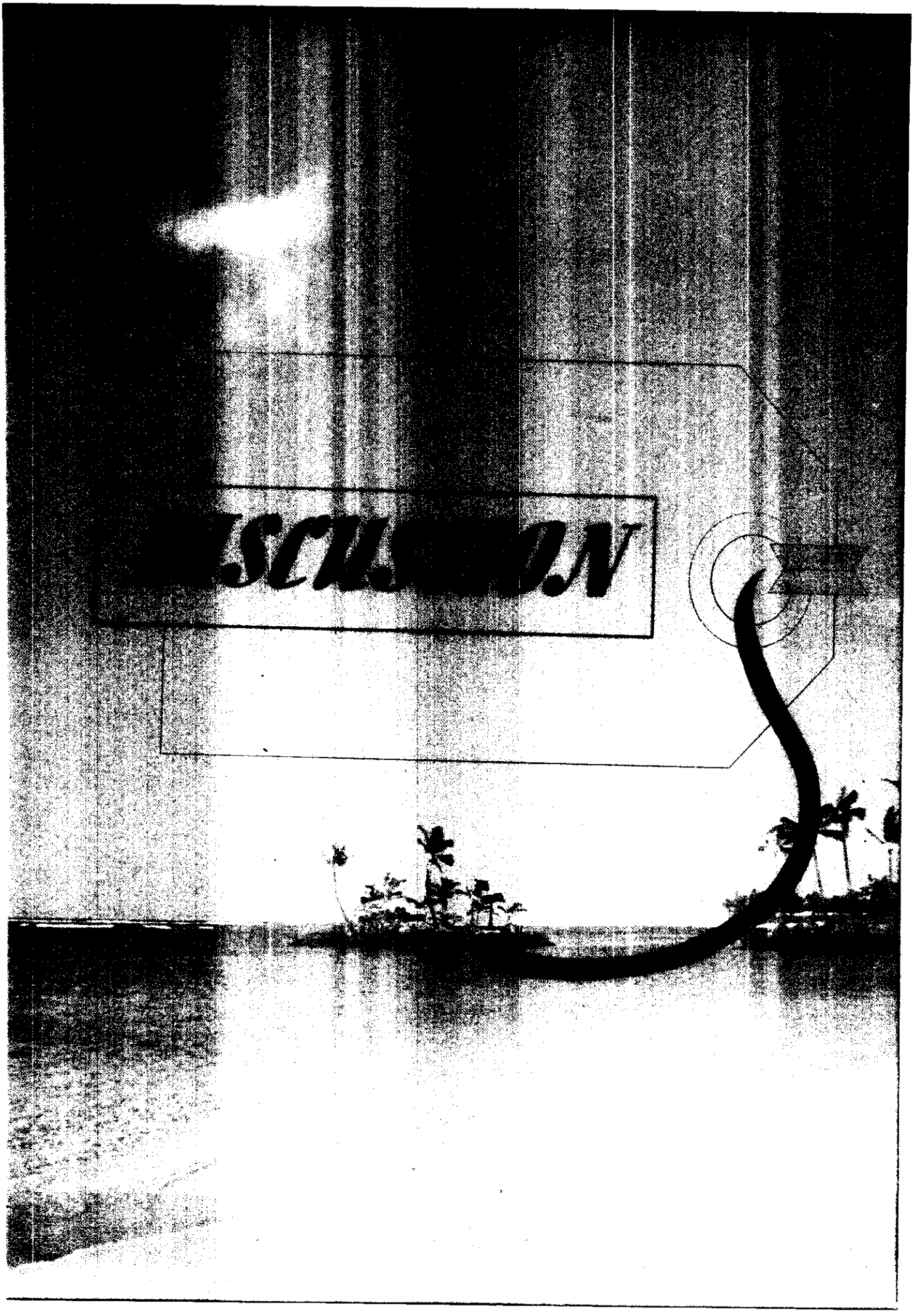


Figure (29) a submucous fibroid.

Figure (30) fibroid polyp.



DISCUSSION

Since *Asherman, (1948)* described the syndrome that bears his name more than five decades ago, it is generally accepted that most intrauterine adhesions follow puerperal curettage or instrumental abortion. When the endometrium is curetted, as long as the basal layer remains intact, no adhesions develop because of the rapid repair mechanism of the lining epithelium. However, since the uterine walls during or immediately after pregnancy are extremely softened, mechanical evacuation of the uterine contents risks removal of the myometrium as well as the stratum basalis of the endometrium, even with gentle manipulation as postulated in many current publications *(March, 1996).*

Hysterography was the investigation used most often to establish the presence of adhesions. The finding of lacunar-shaped defects placed irregularly through the cavity is strongly supportive of the impression of IUAs. Unfortunately, false-positive studies occur, and neither the extent nor the exact location of the adhesions can be determined with certainty. The definitive diagnostic study is hysteroscopy, where under direct vision, the extent and location of the adhesions may be determined with accuracy. These factors, together with the density of the adhesions, permit the disease to be classified *(March 1988).*

As one reviews the reports on the subject of IUAs., it becomes quite clear that results are difficult to compare

because of the lack of a uniform classification. The incidence of IUAs is also difficult to compare. Accurate information on the frequency of the condition in any given group of women presenting with specific clinical disorders or undergoing any gynecologic investigation or treatment is lacking. The data reported in various sources is based on different parameters, little of, which relate incidence to underlying cause. So little studies have so far dealt with the incidence of the syndrome from the etiologic standpoint.

Sugimoto, (1978) found IUAs in 192 patients, all of which had a history of intrauterine manipulation; 39 cases (20.3%) were following puerperal curettage, 72 cases (37.5%) following spontaneous abortion, 59 cases (30.7%) following legal abortion, one case (0.5%) following diagnostic curettage, 5 cases (2.6%) following myomectomy, 7 cases (3.6%) following caesarian section.

Patrick et al., (1981) reported 224 cases of primary and secondary infertility of whom 76 cases had undergone earlier curettage. Of these curetted patients 37 cases (48.7%) had adhesion formation when examined hysteroscopically. Of the 148 non-curetted patients only 11 cases (7.4%) had IUAs. Of the 48 patients with IUAs 29 cases (60.4%) had undergone diagnostic curettage, 8 cases (16.7%) had been to complete either a spontaneous or a therapeutic abortion, 2 cases (4.2%) had undergone cesarean section, one case (2.1%) had had post-partum sepsis, and 4 cases had a history suggestive of pelvic inflammatory disease. Four patients, including one with

primary infertility, showed no evidence of antecedent events, which might have been causative.

Schenker and Margalioth, (1982) reported 178 cases with IUAs of which 91 cases (51.12%) were following curettage for induced abortion, 62 cases (34.8%) following curettage for missed abortion, 11 cases (6.1%) following postpartum curettage, 12 cases (6.7%) following genital tuberculosis infection, 2 cases (1.1%) following myomectomy.

Adoni et al., (1982) in a prospective study on 120 patients performed hysterosalpigography (HSG) 6 to 8 weeks after abortion. They found intrauterine adhesions in 13% of the patients. IUAs were found in 30.9% of patients after missed abortion and in only 6.4% of cases after early abortion.

Hamou et al., (1983) reported 69 cases with IUAs, of which 52 cases (75.3%) following curettage of a recently pregnant uterus, 5 cases (7.2%) following diagnostic curettage, 3 cases (4.3%) following cesarean section, 3 cases (4.3%) due to pelvic tuberculosis, one case (1.4%) following myomectomy and in 5 cases (7.2%) the etiology could not be identified.

Valle and Sciarra, (1988) reported 186 cases with IUAs of which; 92 cases (49.1%) following curettage for incomplete abortion, 44 cases (23.5%) following puerperal curettage, 32 cases (17.1%) following induced abortion, 11 cases (5.8%) following curettage for missed abortion, 4 cases (2.1%) following molar abortion, 2

cases (1%) following metroplasty for septate uterus and in one case the etiology could not be identified.

Lancet and Kessler, (1988) reported that 60% of women suffering from IUAs had a previous history of spontaneous abortion and 17.8% had a history of induced abortion.

Golan et al., (1992) in a study on 60 patients of missed abortion, performed a diagnostic hysteroscopic examination 8 to 12 weeks after dilatation and curettage. Of these 60 patients 10 patients (16.7%) showed IUAs.

Nosseir, (1993) in a study on 90 cases of missed abortion, performed diagnostic hysteroscopic examination immediately before dilatation and curettage and a second look hysteroscopic examination 6~8 weeks after dilatation and curettage. Of these 90 cases, IUAs were found in 6 cases (6.7%) before, and in 15 cases (16.7%) after dilatation and curettage.

Freidler et al, (1993) studied hysteroscopically the occurrence and extent of IUAs. 4~ 5 weeks after dilatation and curettage for first-trimester spontaneous abortion. Among 147 studied cases IUAs. Were found in 19% of cases. In this study the incidence of IUAs after one abortion was 16.3% all were of mild extent and filmy consistency occupying less than one-fourth of the uterine cavity. After 2 abortions the incidence of IUAs was 14%. The incidence after 3 or more abortions was significantly increased to 32%. More than one half (58%) of IUAs diagnosed in the latter 2 groups were more severe.

In this study 200 patients were subjected to hysteroscopic examination 4~6 weeks following curettage for spontaneous first trimester abortion. Of these cases, 154 cases (77%) showed normal hysteroscopic findings. IUAs were detected in 34 cases (17%). These results agree with those of *Freidler et al., (1993).* They found an IUA incidence of 19% after curettage for first trimester spontaneous abortion. These results also agree with those of *Nosseir, (1993).* He found an IUAs incidence of 16.7% after dilatation and curettage for missed abortion.

Our results are more than those of *Adoni et al., (1982).* They used hystero-salpingo-graphy and detected an IUAs incidence of 13% among those who had undergone curettage because of abortion. We attributed this low incidence to the use of H.S.G. In our study we used hysteroscopy, which is the definitive diagnostic study, and permits the diagnosis of even the most fine and filmy adhesions.

The relation between recurrent abortion and adhesions is difficult to assess. Women with recurrent abortion are frequently diagnosed to have IUAs. However, such a diagnosis might be made only after multiple curettages have been performed; the adhesions, therefore, may be the sequelae to treatment for each loss rather than the cause of recurrent abortion. Moreover, these adhesions may have developed only after the last curettage *(March, 1996).* In our study, we found that the incidence of IUAs increases with the number of

abortions the patient has suffered. Out of 127 patients who suffered only one spontaneous abortion 15 cases (11.8%) had IUAs. Of 48 cases undergone two abortions 11 cases (22.9%) were affected by IUAs. Out of 25 cases undergone three or more abortions 8 cases (32%) developed IUAs. *Friedler et al., (1993)* detected that the IUAs incidence after one abortion was 16.3%. After 2 abortions their incidence was 14%. After 3 or more abortions the incidence they detected was significantly increased to 32%.

Also as regards the relation between the severity of IUAs and the number of abortions there were a positive correlation as shown by the observation that all cases of IUAs following only one abortion were of mild degree and filmy consistency. After two abortions one case (2.1%) showed moderate adhesions. After three or more abortions two cases (8%) showed moderate IUAs.