SURGICAL COMPLICATIONS IN PREGNANCY

(excluding ectopic pregnancy)

by

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The surgical complications occurring in pregnant women are no different from those which occur in non-pregnant women. In this paper an attempt is made to review only the surgical complications and some obstetric conditions necessitating surgical intervention, exclusive of ectopic pregnancy. During the period of nine years, from 1958-1966, the number of deliveries in Cama and Albless Hospitals was 51,572 and surgical complications were recorded in 24 cases, giving an incidence of 1:2148 deliveries. This number is rather small and may not be considered worthy of reporting but some of these complications are interesting and were responsible for considerable difficulty in diagnosis during pregnancy and labour, and for these reasons this paper is presented. The incidence of ectopic gestation in Cama and Albless Hospitals was 1 in 333 deliveries.

The following types of surgical complications occurred in Cama and Albless Hospitals:

Types of complications

	Cases
1. Ovarian cysts requiring surgical interference	9
2. Myomas requiring surgical interference	3
3. Acute torsion of uterus	1
4. Herniation of uterus	1
5. Acute appendicitis (perforated)	1
6. Subacute intestinal obstruction	1
7. Strangulated femoral hernia	1
8. Acute cholecystitis (perforated)	1
9. Ectopic pelvic kidney	1
10. Calculus in bladder	1
11. Tuberculosis of hip joint	1
12. Bilateral fracture femur	1
13. Carcinoma stomach	1
14. Burns	1
	24

Ovarian Neoplasms during pregnancy: They are always treated surgically because of the danger of complications like torsion, haemorrhage, necrosis, rupture during labour and possible malignancy. These complications increase by 25 per cent in pregnant patients as compared to non-pregnant cases. Out of 9 cases reported in this paper, 4 were dermoid cysts, 4 were serous cystadenomas and one had bilateral theca lutein cysts of large size which had undergone torsion requiring surgical intervention. Solid tumours are un-

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Paper read at the 14th All-India Obstetric and Gynaecological Congress held at Nagpur on 26/28th November 1967.

common with pregnancy and two-thirds are of a malignant nature. Five of these cases were admitted as emergency cases because of torsion of pedicle, and at laparotomy, one was dermoid, 3 were serous cystadenomas and one was bilateral theca lutein cysts undergoing torsion 3 weeks after evacuation of a vesicular mole. The other 4 cases were diagnosed on routine palpation. The duration of gestation in all these cases varied from 8 to 20 weeks and laparotomy was done at the most optimum period, that is middle trimester. Only when an ovarian neoplasm was diagnosed for the first time in the last month of pregnancy was caesarean section with cystectomy the method of treatment. Dystocia during labour may result if the tumour gets incarcerated in front of the presenting part. The incidence of malignant tumours with pregnancy is only 2-3 per cent, and if present a total hysterectomy and bilateral salpingo-oophorectomy is carried out. Post-operative injections of Proluton depot along with sedatives help pregnancy to continue without early interruption. In the puerperium torsion is frequent, requiring surgical treatment.

Myomas requiring surgical interference in pregnancy

The incidence of myomas with pregnancy, as has been reported by one of us, was 25 in 29,930 deliveries, i.e. 0.084%. This is quite low and in this paper 3 cases are reported in which myomectomy was done during pregnancy at 12, 14 and 26 weeks respectively. The indications for operation were red degeneration in one case where symptoms were not responding to medical treatment, and in two other cases a wrong diagnosis of ovarian tumour undergoing torsion was made. Myomectomy should only be done during pregnancy in case of twisting of a pedunculated fibroid, or if there are symptoms of urinary obstruction. Two of these patients went to term and delivered vaginally and one patient aborted.

Torsion of Uterus: This is an extremely uncommon accident in a normal uterus and is associated with fibroids or a bicornuate uterus. Nesbit and Corner collected 108 reported cases. We had a multigravida at term who was taken up for caesarean section because of a high and floating head in spite of good pains for many hours. On opening the abdomen it was noted that the uterus had rotated by 135°. Detorsion and caesarean section was carried out.

Hernia of Uterus: This is due to excessive laxity of the abdominal wall, wide separation of recti muscles and giving way of an abdominal cicatrix; the abdomen becomes pendulous and the enlarging pregnant uterus herniates out of the abdomen. Sometimes the gravid uterus gets incarcerated in the ventral hernia. One such case was noted in this series. A multigravida, having amenorrhoea of six months, was admitted with severe pain in abdomen, and a twenty-six weeks sized uterus was found herniating through recti muscles, with signs of intestinal obstruction. Conservative treatment for obstruction was started and she aborted spontaneously on the fourth

day. Repair of ventral hernia with sterilisation was carried out later.

Appendicitis in Pregnancy: The incidence of appendicitis in pregnancy varies from 1:1500 at Mt. Sinai Hospital (0.07 percent) to 1:983 (0.1 percent) at Grace Hospital, Detroit. The incidence of appendicitis in Cama and Albless Hospitals is extremely low, 1-2 cases in about five thousand deliveries per year and we had one case where perforation occurred requiring immediate laparotomy. When this complication occurs during pregnancy the usual signs and symptoms are not typical and thus it is likely to be missed, unless well kept in mind. This is due to the space occupying uterus causing displacement of caecum and appendix upwards, laterally and posteriorly, altering the usual signs like rebound tenderness and rigidity of the abdominal wall. The differential diagnosis of acute pyelitis, accidental haemorrhage, and twisted ovarian cyst has to be considered, and these conditions should be carefully excluded. It is safer to arrive at a diagnosis of acute surgical abdomen, and explore the abdomen rather than to wait too long and risk perforation. When the patient has approached term caesarean section along with appendicectomy has to be performed. Because of the risk of infection to the uterus some prefer to do caesarean hysterectomy and appendicectomy.

Case Report:

22 year old, 2nd gravida, amenorrhoea four months, was admitted as an emergency case with severe pain all over the abdomen in a toxic state. Because of the size of the uterus which was about 24 weeks, and absence of definite tenderness or rigidity, the provisional diagnosis of accidental haemorrhage was made. As the signs got localised the diagnosis of acute appendicitis was made and, at laparotomy, the gangrenous appendix on the point of rupture was removed. The patient recovered after a stormy convalescence and delivered at term.

Intestinal Obstruction. Though infrequent, this is noted during pregnancy between the fourth and fifth months when the uterus becomes an abdominal organ, between the 8th and 9th months when the foetal head descends into pelvis and during the puerperium. The reported incidence is 0.0034 to 0.00014 per cent and the usual causes, like adhesions, bands, volvulus, intususception and hernia are present just as in the non-pregnant woman. Vomiting, a symptom of pregnancy, differs from the vomiting of intestinal obstruction; in the latter case it is foul-smelling and of faecal odour. X-ray is useful for the diagnosis of obstruction. Decompression of bowel and surgical removal of the cause of obstruction are the principles of therapy. In this series, a pregnant woman was admitted for recurrent attacks of subacute obstruction. She was known to have abdominal tuberculosis before conception. Conservative therapy was carried out till she delivered.

Hernia: The hernias most commonly associated with pregnancy are inguinal, femoral, incisional and diaphragmatic. The symptoms are aggravated during pregnancy due to

increased intra-abdominal pressure. Treatment during pergnancy is symptomatic, unless strangulation occurs necessitating immediate surgery. One patient with amenorrhoea of two months was admitted for a right sided obstructed femoral hernia. At operation, Reiter's type of hernia of ileum with early gangrenous changes was found. Resection of the bowel was not carried out as there were good pulsations in the blood vessels. Pregnancy continued without interference.

Acute Cholecystitis: Acute inflammation of gall bladder is associated with calculi in more than 90 per cent of cases, the reported incidence in pregnancy being .02 to .03 per cent. The treatment during pregnancy is usually conservative. Indications for immediate surgery are cases not responding to medical treatment and perforation, or common bile duct obstruction with jaundice. The case recorded here is of a twenty-two year old pregnant patient admitted for severe pain in abdomen and vomiting at term. As all signs of peritonitis were present, a laparotomy was performed. Caesarean section was first carried out to empty the uterus. Biliary peritonitis with perforation of the gall bladder was then found, and because of the poor condition of the patient radical surgery was abandoned and only drainage carried out. The patient expired on the same day.

Urological complications of pregnancy

Pelvic ectopic kidney: Anderson *et al.* reported 14 cases and collected from world literature 98 cases. The incidence of abortion reported is 15.3 per cent, perinatal mortality is 15.3 per cent and maternal mortality 10.2 per cent. Spontaneous vaginal delivery occurred in 73.2 per cent. Caesarean section is indicated only if the presenting part fails to engage and dystocia occurs during labour because of the ectopic kidney. Interruption of pregnancy is not advocated except for pyelonephritis, hydronephrosis, tuberculosis or neoplasm arising in the ectopic kidney. In this series, a case of ectopic kidney was noted incidentally during caesarean section, the indication for section being contracted pelvis.

Calculus disease in Pregnancy is an uncommon complication in spite of the frequency of stasis and dilatation of the urinary tract. In the management of a case the following factors have to be considered:—

(i) Stage of pregnancy and viability of foetus,

(ii) Location of stone,

(iii) Presence of infection and obstruction,

(iv) Renal function and the general condition of the patient.

Radiological investigations and surgery, as far as possible, should await termination of pregnancy. A multipara at term was admitted with symptoms of urinary infection. A large calculus in the bladder was palpated per vaginam and confirmed by cystoscopy. As the size of calculus would have resulted in dystocia during labour, suprapubic cysto-litho-

tomy was carried out. The patient delivered per vaginam.

Orthopedic complications in pregnancy

Tuberculosis of the spine and hip-joint: The diseases should be diagnosed carefully by x-rays as symptoms such as, backache and pain in the bones are also present in osteomalacia, a very common disease of pregnant women. Management is the same as for all tubercular bone lesions, that is rest, immobilisation and chemotherapy. One case of tuberculosis of hip joint was recorded which was treated and had a vaginal delivery.

Fracture of femur and pelvis sometimes creates problems during delivery, but otherwise should be treated in the routine way. In fracture femur cases operative treatment may sometimes be postponed till pregnancy terminates, because pregnancy may adversely affect the orthopedic results. A primigravida, sterile for 5 years, age 23, 7 months pregnant was admitted in the orthopedic unit of a sister institution with bilateral fractures of the shaft of the femur. The pregnancy was allowed to continue till term when caesarean section was performed with onset of labour pains. Further orthopedic treatment was carried out after delivery.

Carcinoma of stomach: It was noted in a patient with about six months' amenorrhoea who was admitted for incessant vomiting, pyrexia and anorexia. The patient expired before suitable therapy could be given. During pregnancy, when the patient has severe vomiting an attempt should be made to exclude all organic causes responsible for vomiting. An early diagnosis of the malignant lesion of the gastro-intestinal tract may be very valuable in instituting proper therapy in these young women.

Burns with Pregnancy require the same therapy as in non-pregnant cases. One case of severe burns was admitted with symptoms of threatened abortion. Spontaneous abortion took place but because of toxaemia she expired on the second day.

Conslusions

1. Twenty-four cases of different surgical complications are reported in 51,572 deliveries giving the incidence of one in 2148 deliveries. Obstetric complications requiring surgical intervention are included but ectopics are excluded.

2. Symptoms and signs are sometimes modified during pregnancy, and unless one keeps these complications in mind, delay occurs in the diagnosis and treatment which may lead to increased maternal morbidity or sometimes a maternal death.

Acknowledgement

We wish to thank our chief and the Superintendent, Dr. S. Aptekar, F.R.C.O.G., F.R.C.S. (E), for her valuable help and guidance and allowing us to use the hospital records, and all other honoraries of Cama and Albless Hospitals for allowing us to record cases treated by them.

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