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Ileo-Cervical Fistula: An Unforeseen Complication After Treatment Of Cancer Cervix Following Supra-Cervical Hysterectomy in The Past

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Abstract : *Sub total hysterectomy is a surgical procedure used to be performed for benign diseases. This patient was performed a supra- cervical hysterectomy 3 years back later she developed cancer cervix. Following treatment with radiotherapy (by both external and intracavitary) she developed fistula which was initially thought to be recto-vaginal but later it was confirmed as ileo-cervical fistula.*

Keyword: *Supra cervical hysterectomy, Ileo-cervical fistula, Cancer cervix, Complication*

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I. Introduction

Fistula is a rare complication of radiotherapy treatment especially in carcinoma cervix, but it is sometimes seen and the most common fistula encountered is recto-vaginal fistula [1]. Fistulous communication between uterus and small intestine is still rarer [2], while case of fistula between small intestine and cervical stump has not been reported so far. In the present paper we report a case of fistula between ileum and cervical stump which was leftover following supra cervical hysterectomy performed 3 years back for benign cause. We also try to address the place of subtotal hysterectomy in the present era along with diagnostic dilemma of such fistulous communication and its management thereafter.

II. Case Report

This description pertains to an adult female, 51 years old, who presented to our Gynaecology clinic with history of intermittent bleeding per vaginum for 2 months. Her past history was significant as she had undergone a supra-cervical hysterectomy 3 years back for some benign disease. Cervical biopsy was suggestive of moderately differentiated squamous cell carcinoma. After clinical examination she was given a FIGO stage of IIIB. Metastatic work up was normal. Patient was initially given 2 cycles of neoadjuvant chemotherapy based on Cisplatin and 5 FU, followed by external beam radiotherapy (EBRT) at 44Gy in 22 fractions over 4.5 weeks. After 3 weeks of EBRT patient was found to be fit for intracavitatory brachytherapy (I/C Brachy). Patient was kept on monthly follow up after intracavitary brachytherapy. On 3rd follow up, patient presented with passage of foul smelling discharge and faecal matter per vaginum, on pelvic examination a recto-vaginal fistula was suspected. Patient was then referred to surgery department, where a transverse loop colostomy was done as a bypass procedure.

But the patient again presented 1 month later with same history of passing of faecal matter through vagina despite of colostomy. Hence to detect the exact site of communication barium meal follow through (BFMT) study was performed; surprisingly it showed a communication tract between the ileal loops and cervical stump (Figure -1). At the time of writing this report patient was put on conservative management and she will taken up for radical surgery once her general condition improves.

III. Discussion

Subtotal hysterectomy, a relatively popular procedure for benign conditions of the uterus in the past years, is rarely performed nowadays [3]. The major disadvantage of this procedure is that as the cervix is left

behind the possibility of carcinoma cervix still remains, which is then known as carcinoma of cervical stump (CCS). CCS is divided into, true, when symptoms of carcinoma appear after 3 years of surgery, and coincidental, when the symptoms appear within 3 years of surgery suggesting that carcinoma was presumably present at time of surgery [4]. It has been noted that the incidence of CCS is more when subtotal hysterectomy is performed in women more than 50 years of age [5].

There is a general consensus that the best results in CCS, especially in advanced diseases are achieved with the use of combination EBRT and I/C Brachy; although with more side effects as compared to treatment with intact uterus [4]. In one series Miller noted that intracavitary insertion can be complicated by distorted anatomy from large tumour volume and very short canal length so that such patients need relatively more external beam delivered than those whose anatomy is more favorable [4].

Although equivalent survival results can be achieved with CCS, as with intact uterus, such results come at a price with there being more complications when treating cases of CCS likely because of:-

- Absence of a uterine fundus
- Due to previous abdominal surgery, a hollow space is created into which the intestines may fall; moreover these patients are more likely to have pelvic adhesions and thus sustain more radiotherapy complications in the small bowel. The terminal ileum may particularly sustain chronic damage because of its relatively fixed position at the cecum [6].
- In addition the inability to achieve ideal dosimetry with intracavitary implants, because of the short canal length remaining in the stump, requires more external beam dose to be delivered than is often necessary in cases with an intact uterus [4]. Moreover because of absence of uterine fundus the small intestine is closer to the central uterine tandem and hence chances of overdosing it is a possibility.

A fistula represents an abnormal communication between two epithelialized surfaces, one of which is a hollow organ [7]. Gastro-intestinal (GI) fistulas are most commonly iatrogenic [7].The aetiology of intra-pelvic fistulas may be related to obstetrical complications, pelvic malignancy, and radiation therapy, and inflammatory bowel disease, iatrogenic or traumatic causes [8]. Anatomically, GI fistula may originate from the stomach, duodenum, small bowel (proximal or distal), or large bowel. Physiologically, the fistula is classified into high and low output on the basis of the volume of discharge in 24 hours [7]. Fistulous communication between the uterus and GI tract is rare [2]. Martin et al [9] published perhaps the largest review of entero-uterine fistulas in 1956 which described 80 cases, 42 of which, followed obstetric injury, 17 resulting from inflammatory processes, 12 following curettage, and 9 related to carcinoma. As obstetric complication and inflammatory bowel diseases are better managed, it is reasonable to believe that most fistulae between uterus and GI tract, now, are caused due to pelvic tumors [2]. When irradiation is combined with surgery, the complication rate tends to be somewhat higher [10]. The dose of irradiation, technique, and the type of surgical procedure performed are important in determining the morbidity of combined therapy [3]. Radiotherapy may weaken the wall of uterus by muscular atrophy and ischemic changes [11]. Radiation induced intestinal changes are known as radiation enteritis and it is a form of intestinal ischemia resulting from damage to vascular endothelial cells that leads to endarteritis obliterans [12]. The time interval between the radiation therapy and the development of symptoms varies considerably and may be as long as 25 years but sinuses and fistula are rare findings [12].

Fistulas of the gynaecologic organs are a distressing complication of gynaecologic malignancy and may significantly affect the patient's quality of life. Symptoms of intestinal fistula include foul smelling discharge and loss of intestinal contents through the fistula results in hypovolemia and dehydration, electrolyte and acid-base imbalance, loss of protein and trace elements, and malnutrition [7]. Entero-uterine fistula also present with vaginal discharge and diagnosis can be confirmed clinically by observing intact vaginal wall and discharge coming through cervical os [2]. Management of fistulas is challenging, often frustrating, and complicated. Localization of the fistula site is imperative prior to attempted surgical correction. Radiographic techniques ie BMFT and barium enema combined with endoscopic investigations of the lower GI tract are the preferable methods [13].

Those who have radiation induced entero-vaginal fistulas often are compromised nutritionally and benefit from bowel rest and parentral nutrition. After months of medical therapy, surgical repair must be performed because chances of small bowel fistula especially from ileum will rarely close spontaneously. Careful dissection of intestinal loops is necessary to minimize enterotomies, since any bowel injury is a potential site of subsequent bowel perforations or entero-cutaneous fistulas [13]. Mortality associated with fistula is affected by the presence of sepsis, aetiology, volume of output and nutritional status. Thus the ileal fistulas which tend to remain open; have fistula related mortality of 20% to 30% [14].

Figures

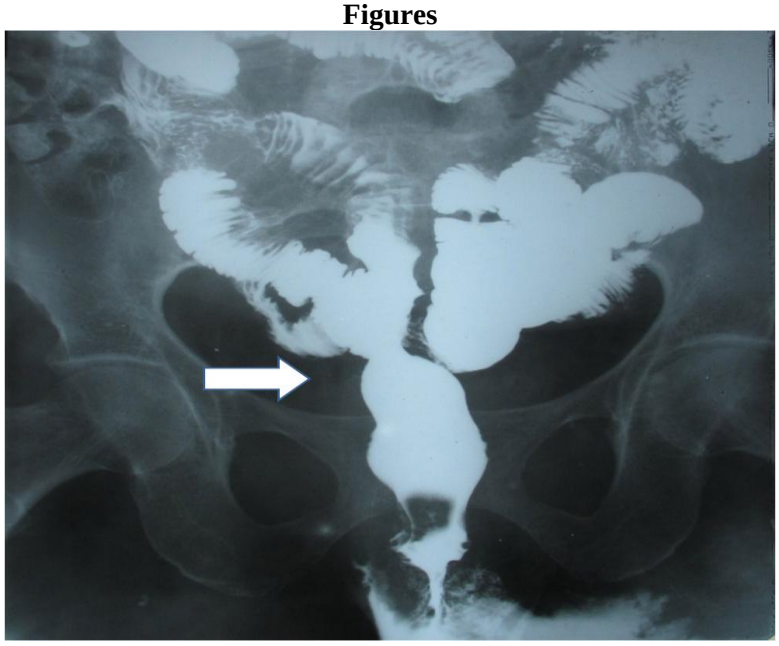

Figure Legend
Figure 1:

Barium Meal Follow Through film showing a communicating tract between ileal loop and cervical stump which was present after supra-cervical hysterectomy

IV. Conclusion

Thus in conclusion, through this case report we would like to highlight the following points: -

1. Subtotal hysterectomy, as a procedure, should be reconsidered even in benign diseases for women who are not expected to follow active screening procedures for carcinoma cervix; especially in endemic countries such as ours.
2. I/C Brachy should have strong quality assurance in such patients, as they already receive higher dose through EBRT and moreover there is loss of uterine fundus and hence the small intestines are closer to the central uterine tandem.
3. Fistulas though very rare should be kept in mind while the patient is on follow up.
4. Multiple fistulas can be present especially in cancer patients who are treated with multimodality treatment including surgery, radiotherapy and chemotherapy.
5. Fistula worsens the patient's quality of life, her social life and has high rates of mortality.

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