

Klinies word 'n rinoliet gewoonlik in die vloer van die neusgange, halfpad tussen die anterior en posterior nares, gevind.<sup>7</sup> Dit is ingebed tussen edemateuse granulomateuse weefsel en word omring deur etterige nasale sekresies. Komensale bakterieë speel ook 'n belangrike rol in die vorming van 'n rinoliet.

Simptome en komplikasies ontstaan gewoonlik a.g.v. obstruksie en sekondêre infeksie. Akute sekondêre simptome sluit 'n unilaterale etterige neusafskeiding,<sup>8</sup> epistakse en anosmie in. As infeksie intree, sal sinusitis met pyn en koors ook volg. Ander komplikasies wat mag voorkom, sluit perforasie van die verhemelte<sup>9-10</sup> en neusseptum, penetrasie van die nasoantrale wand,<sup>11</sup> deviasie van die septum en, soos in ons pasiënt, chroniese otorree in.

Alhoewel rinoliete uiters seldsame bevindings is, word 'n baie belangrike aspek van die ondersoek van 'n pasiënt met unilaterale otorree weer uitgelig. 'n Deeglike ondersoek van die nasofarinks vorm 'n integrale en onontbeerlike deel van die roetine- otologiese ondersoek.

Ons wil graag die Mediese Superintendent van Tygerberg-hospitaal bedank vir toestemming tot publikasie en mev. A. Hugo vir die tikwerk.

#### VERWYSINGS

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# Acute abdomen in a patient with situs inversus

## A case report

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### Summary

The case of a man with situs inversus who presented with acute abdomen is reported. Acute left-sided appendicitis was considered before operation, but at laparotomy an omental abscess of unknown aetiology was drained. The appendix, localized in the left iliac fossa, was removed but was normal on histological examination.

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The exact incidence of situs inversus viscerum has not been definitely established but is thought to be 1 in every 6-8000.<sup>1-6</sup> Blegan<sup>1</sup> has reported that a surgeon may expect to encounter this anomaly only once or twice in a lifetime. Although it is rare, the surgeon must familiarize himself with this anomaly, thus avoiding embarrassing errors, and consider it as a remote possibility in all cases of obscure abdominal pain.<sup>1</sup>

### Case report

A 20-year-old coloured man was admitted to Tygerberg Hospital with a 2-day history of pain in the left iliac fossa, fever and vomiting. The pain was constant in nature and did not radiate from the umbilicus to the left iliac fossa. He had been quite well before this illness.

Clinical examination revealed a normal cardiovascular and respiratory system. The blood pressure was 110/70 mmHg, the pulse rate 90/min and temperature 38,5°C. Abdominal examination revealed maximal tenderness and guarding in the left iliac fossa together with positive signs of peritonitis although there was no abdominal distension or any mass. Bowel sounds were normal. Rectal examination was non-contributory and urinalysis was within normal limits. A definite clinical diagnosis was difficult to make at this stage but mesenteric adenitis, enterocolitis and intestinal obstruction were considered in the differential diagnosis. Urgent laparotomy was obviously necessary.

A chest radiograph revealed dextrocardia (Fig. 1) and an abdominal radiograph revealed a left-sided liver (Fig. 2) and malrotation of the colon in the absence of intestinal obstruction. The radiographic findings confirmed the diagnosis of situs inversus viscerum, which was not suspected clinically. A final pre-operative clinical diagnosis of acute left-sided appendicitis in a patient with situs inversus was made.

At laparotomy the abdomen was entered through a left lower paramedian incision. The viscera were completely transposed. Much to the surprise of the surgeon the appendix situated in the left iliac fossa was completely normal. There were no signs of peritonitis, intestinal obstruction or mesenteric adenitis. Further inspection of the abdominal cavity revealed a small sealed-off omental abscess which was attached to the anterior abdominal wall. The abscess, which was drained, contained a small amount of pus and pieces of 'straw' having the appearance of 'grass seeds'.

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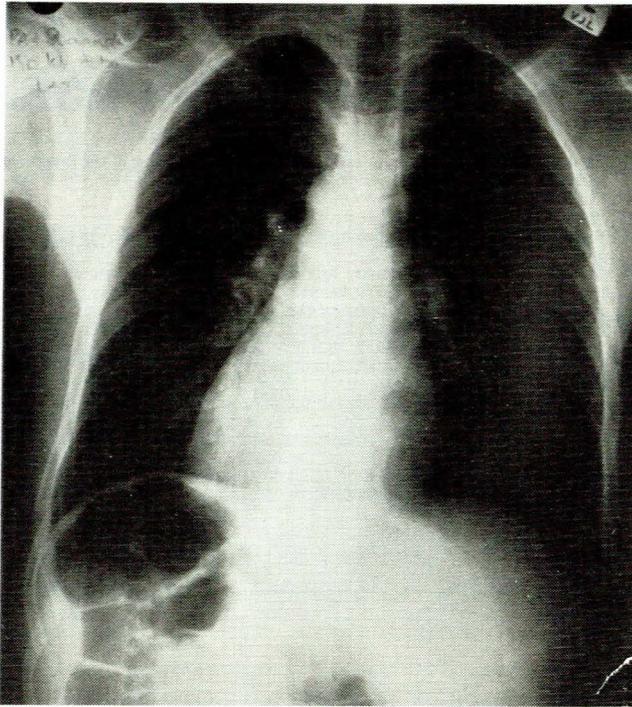


Fig. 1. Chest radiograph showing dextrocardia.

There were no signs of a possible foreign body perforation of the bowel, and the abdominal skin and subcutaneous tissue overlying the abscess were normal. The appendix was removed and found to be normal on histological examination. Histological examination of the abscess wall and contents was non-contributory. Culture of the abscess pus was sterile.

The patient made an uneventful recovery and was discharged 7 days after operation.

## Discussion

This case is interesting in that although situs inversus was correctly diagnosed before surgery the cause of the abdominal pain was other than an acute left-sided appendicitis.

A left-sided appendix is a rare anomaly and may be due to situs inversus viscerum or malrotation of the midgut loop.<sup>4,6</sup> When acute inflammation occurs in such an appendix, the correct diagnosis is often not made, since the symptoms and signs are often atypical.<sup>3,4</sup> Blegan<sup>1</sup> points out the difficulty in recognizing situs inversus; an incorrect pre-operative diagnosis was made in approximately 45% of cases and as a result an incorrect surgical incision was made in 31%. However, in spite of the difficulties in diagnosis, a good proportion of reported cases were diagnosed before operation.<sup>4</sup> An interesting discussion was centred around the localization of abdominal pain associated with acute left-sided appendicitis,<sup>1</sup> and an excellent account has been given by Owen-Smith.<sup>4</sup> Although the viscera in situs inversus are transposed, the components of the nervous system are not reversed; hence pain in acute left-sided appendi-

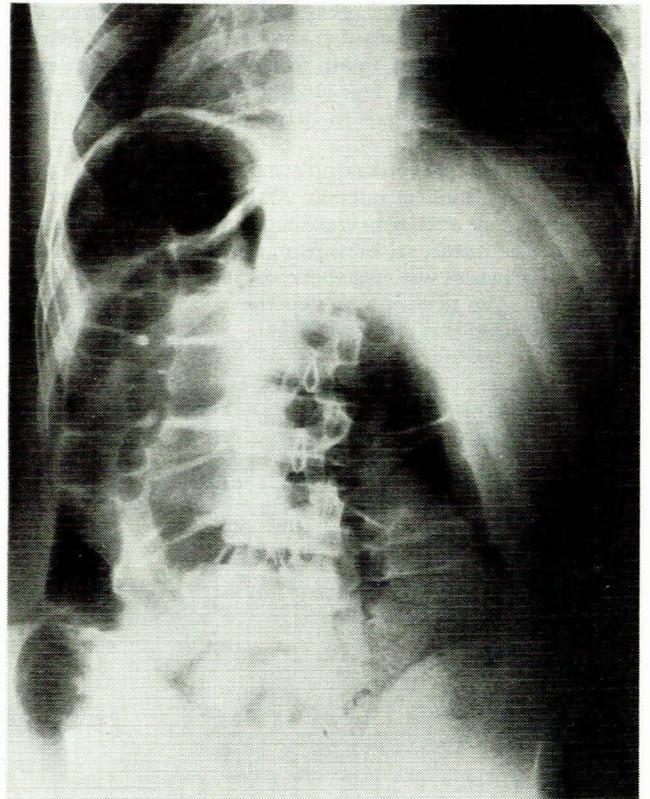


Fig. 2. Abdominal radiograph. The presence of a left-sided liver shadow together with dextrocardia confirms the diagnosis of complete situs inversus.

citis should be referred to the right side. In practice the pain may start in the peri-umbilical region, move to the right iliac fossa because of false projection, and then settle in the left iliac fossa over the inflamed organ.<sup>1,4</sup>

Although situs inversus in itself is not a serious hazard to normal health and longevity, association with other congenital abnormalities has been reported and includes Kartagener's syndrome, which is characterized by situs inversus viscerum, bronchiectasis and sinusitis.<sup>1,3</sup>

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