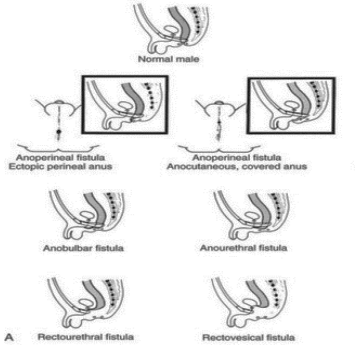
Indian Association of Pediatric Surgeons

Patient Information Sheet

MALE ANORECTAL MALFORMATIONS



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for & on behalf of the Indian Association of Pediatric Surgeons

What is female anorectal malformation ?

In boys anorectal malformation (ARM) is a congenital defect in which the anus and rectum (the passage from where stools are passed) is not properly formed in the baby. Either the passage is not formed at all or the stools pass through an abnormal passage into the urinary system.

What causes this problem and how common is it ?

During fetal development in the mother's womb or uterus, different organ systems are developing and maturing. The lower end of the intestinal and genitourinary tracts are joined together and separate in early pregnancy. When they do not separate then ARM results. The exact cause is not known. Some boys will have multiple associated anomalies of other organ systems. They occur in ~ 1 in 5000 live births and are slightly more common than in girls (1.2:1).

What are the symptoms ?

There are several ways in which ARM can present in boys. The main ones are :

1. Normally there are separate openings for the urethra (at the tip of the penis) and anus. In ARM the anal opening may either be absent, located abnormally or may communicate with the urinary tract.
2. The stool and bowel gas may come out from the urethral opening or the stool may be mixed with urine.
3. The baby may develop abdominal distension from non-passage of stool.

When to see your doctor ?

Most cases can be diagnosed at birth when the baby is examined by the doctors immediately after delivery. If not detected at birth then consult a pediatric surgeon if any abnormality is seen with the external appearance or for non-passage of stool or for passage of stool from any abnormally located orifice.

How is it diagnosed ?

- If the anal orifice is absent then x-rays in the new born period are done.
- If there is passage of stool of bowel gas from the

- urethra then either a urine examination to confirm the presence of stool in the urine or x-rays with contrast material are done to establish the communication. The x-rays can be done later after the initial treatment has been carried out.
- X-rays are also taken to determine any bony anomalies especially in the spine and sacrum. Ultrasound scan to look for any kidney malformation.
- ECHO cardiography to evaluate the heart.
- Any other associated anomaly may require specific investigations.

What are the treatments available ?

- A tight anal orifice can be treated with just dilatation or by a small operation to enlarge the anal orifice. This is called 'anoplasty'.
- Anoplasty is also curative for abnormal looking anus which may be just covered with a band of skin or a thin membrane through which a streak of stool is seen.
- Absent or abnormally placed anal orifice require surgical treatment.
- Communicating tracts often require staged procedure or multiple surgeries.
- Some associated anomalies require specific surgical procedures.

Are there any alternatives to surgery ?

Almost all ARM in boys require surgical treatment.

What does the operation involve ?

The primary objective is to rectify the basic abnormality :

- Absent orifices need to be created
- Abnormally placed orifices need to be relocated
- Communicating tracts have to be separated

All the above objectives require complex operative procedures either through a cut between the buttocks (posterior sagittal ano-rectoplasty – PSARP) or this approach combined with part of the operation done through the abdomen (abdomino-perineal or AP-PSARP). The aim is to

bring the rectum down to its normal position through the muscles which give control to the passage of stool. Some surgeons would like to do the operation in one stage either by the open or the laparoscopic methods. However, for very complicated reconstructions most surgeons would prefer to do a colostomy as a preliminary procedure. A colostomy is a part of the large intestine which is brought out on to the abdomen so that stools can passed through it. This allows the distal part of the intestine to be cleaned thoroughly so as to minimise the incidence of infection in the major procedure. The appropriate reconstruction is then done. The colostomy is then closed by an operation so that the child can then pass stools from the newly created anus.

In boys in whom the initial assessment reveals that they are unlikely to develop acceptable control on their defecation a decision can be taken to provide a permanent colostomy and allow the stools to be collected in a changeable bag which is worn over the colostomy.

What are the possible complications / what happens after the operation ?

Postoperatively, the boy will have a few tubes placed in different parts for specific reasons and will receive antibiotics and pain relief medicines. If a colostomy is present then oral feeds can be started in a day or two. Feeding maybe delayed if there is no colostomy. Approximately 3 weeks after surgery, dilatation of the newly created anus is started in a gradually increasing manner so that it does not shrink.

If a colostomy has been done before then it needs to be closed by another operation after 3-6 months.

Associated anomalies will require specific treatment.

What is the outlook or future of these children ?

These babies may develop constipation. They may also have difficulty with toilet training and may pass stools in their diaper/underwear without realizing it. These problems can be controlled if treatment is started early. Sometimes a tiny part of the communication may remain attached to the urethra. This can be a source of recurrent infections of the urine and also the testes.