Perianal Actinomycosis—A Complication of a Fistula-in-ano
Report of a Case

Raul Alvarado-Cerna, M.D., Rodolfo Bracho-Riquelme, M.D.

From the Coloproctology Service, Tecamachalco Hospital, ISSSTE, Mexico City, Mexico, and the Durango General Hospital, SSA, Durango, Mexico

Perianal actinomycosis is a rare complication of fistula-in-ano. We report a case of an 82-year-old male with an atypical fistula that had an internal opening at a posterior crypt and, over an extensive perianal and gluteal area, induration with multiple suppurative draining sinus tracts. He underwent fistulotomy and an ample excision of the diseased areas. The pathology report was actinomycosis. Further treatment with antibiotics was continued until the patient was clinically cured. The diagnosis of perianal actinomycosis requires a high degree of suspicion, and should be kept in mind when a fistula presents the aforementioned characteristics or in case of a recurrence after adequate surgical therapy. [Key words: Actinomycosis; Rectal fistula]


Actinomycosis is a noncontagious infection produced by a microorganism that normally lives in the oral cavity. This disease is characterized by chronic inflammation, induration, and formation of fistulas. It was previously considered a mycotic infection, but it is actually produced by an anaerobic, gram-positive bacterium which tends to form a branched filamentous microcolony. Because of its peculiar characteristics, some authors consider it a transitional state.

Two anaerobic species of Actinomyces genus exist: Actinomyces bovis, which causes actinomycosis in cattle, and Actinomyces israelii, which causes human actinomycosis. As a commensal it inhabits the mouth, oropharynx, and also the vaginal cavity. It is not transmitted directly and it is found equally present among urban and rural populations. There are no data that prove transmission through hay, weed, or contaminated animals. It can exist over long periods as a saprophyte, and it is unknown at what moment or how it becomes a pathogen. What has been observed is that its pathogenesis is gradual and requires a previous morbid process (e.g. injury, surgical wound, loss of continuity due to disease, etc.).

There are four clinical forms of this illness: 1) cervicofacial, the most common form; 2) pulmonary; 3) abdominal, mainly in the cecum; and 4) generalized, when there is hematic dissemination. There are isolated reports of actinomycosis of the rectum and of the anus and perineum.

It is most common among young males, with no influence as to race or climate. The characteristic lesion is a hardened zone with multiple small abscesses that communicate, surrounded by granulation tissue and fibrosis. It disseminates by continuity and rarely by the hematic route, generally coexisting with anaerobic bacteria.

The diagnosis is a clinical challenge which is established by the demonstration of A. israelii in pus or in a tissue biopsy. In the discharge minute yellowish granules can be seen, called "sulfur granules." Microscopically, the bacteria appear as a mass of branched elements, surrounded by polymorphonuclear neutrophils (Fig. 1).

The majority of patients respond to medical treatment, but because of the intense tissue reaction caused by the organism, which produces relatively avascular areas, treatment must last for many months. Penicillin and tetracycline are very efficient, and erythromycin is an excellent alternative. Surgery is a valuable aid and on occasions can achieve cure.
REPORT OF A CASE

An 82-year-old male patient was sent from a provincial hospital to our Coloproctology Service at Tecamachalco Hospital, ISSSTE, Mexico City on October 20, 1990 for consultation. He manifested inflammation of the perianal region as well as in both gluteal areas, which caused him moderate pain and continuous discharge. His medical history reported an operation on an abscess more than 20 years previously that required further drainage twice in later years, having received no other medical attention for the last 10 years, other than cleaning. He did not appear to be seriously ill, nor was there evidence of deterioration in his general condition. The proctologic exploration showed an extensive, fibrous, elevated mass, with multiple draining sinus tracts, which covered the anus, left gluteal region, the base of the scrotum, and, to a lesser extent, the right gluteal region. The anus had considerable fibrosis and within the anal canal a profound posterior midline crypt could be seen, through which a probe could penetrate in the direction of a secondary orifice, 3 cm from the anus in the natal cleft (Figs. 2 and 3). Fever, loss of weight, and anorexia were denied. Exploration with a rigid proctosigmoidoscope and a barium enema were normal. Laboratory results only revealed a urinary infection by *Escherichia coli* that was treated with gentamicin. An investigation look-