SURGICAL GASTROENTEROLOGY

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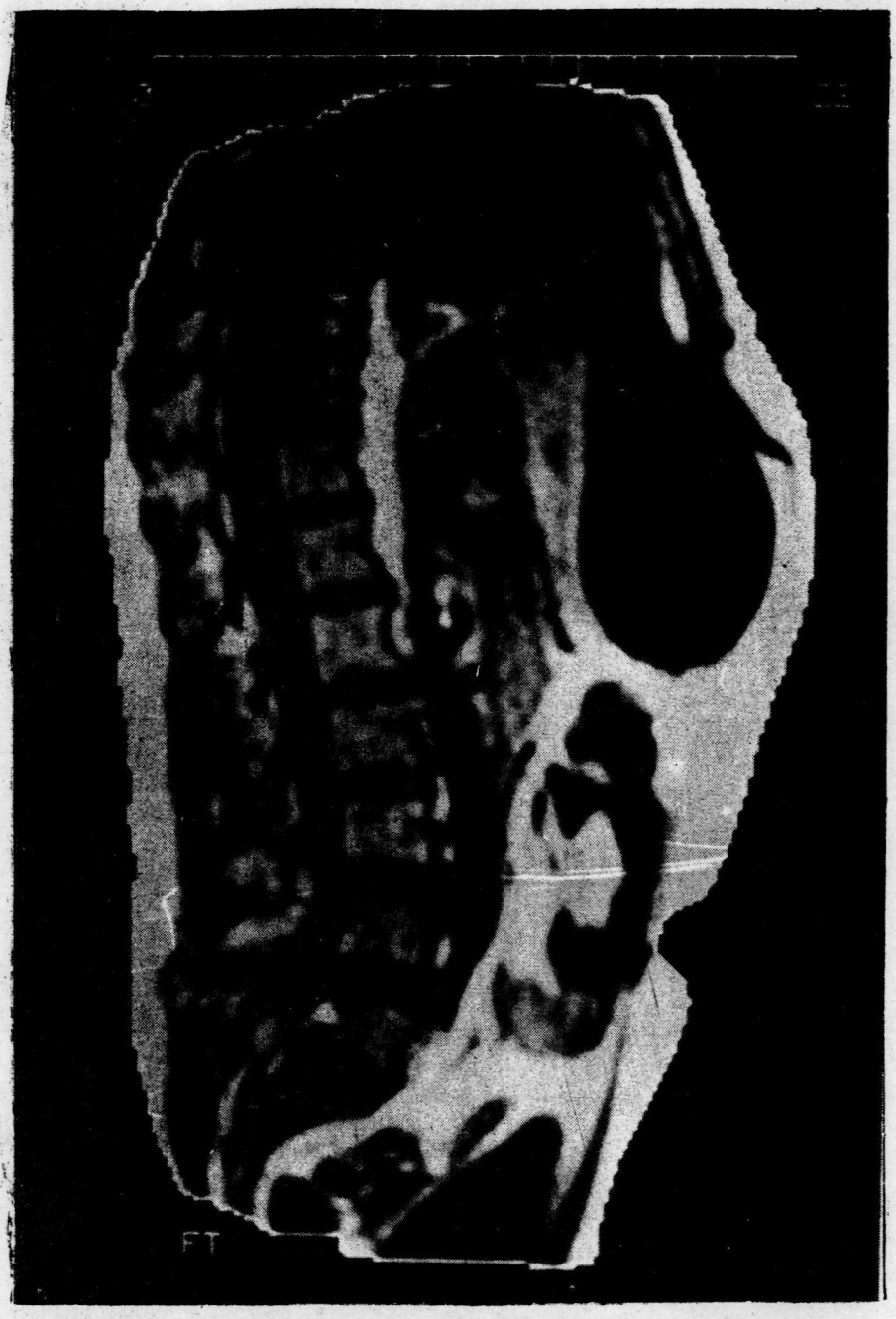

Frontispiece A magnetic resonance scan showing two pseudocysts of the pancreas (courtesy of Professor I. Isherwood and Dr R. Johnson, University Department of Diagnostic Radiology, Manchester).

Preface

Diagnostic and technical innovations have led to major advances in surgical gastroenterology over the past decade.

This monograph is intended to present a broad-based view of the subject in a factual, concise and up-to-date form. The book is aimed primarily at: the final year medical student and those postgraduate students preparing for the final FRCS diploma or the American State Boards Examinations. It is intended as a revision textbook giving an overview of the subject, as well as a rapid source of reference, addressed towards coping with particular clinical problems, which present to the surgeon or gastroenterologist.

A consistent approach to the subject matter has been taken by allocating chapters to the major anatomical structures within the gastrointestinal tract from the mouth to the anus. Disease processes are initially outlined in brief, followed by discusson of the aetiology and pathogenesis, pathology, clinical features, investigations, differential diagnosis, complications and treatments available. Alternative theories, where these exist, are presented with arguments for recommended viewpoints and methods of therapy; a rigid or dogmatic approach has been avoided. Detailed description of operative technique has not been included, though the nature, scope, indications and complications of the various operative procedures have, where indicated, been discussed. The book is divided into subsections of graded importance for ease of reading, reference and rapid identification of facts. In addition to dealing with individual organs and their diseases, a problem-oriented approach has been taken in fields where information is thought to be best gained using such a rationale; for example, in gastrointestinal bleeding.

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1

The Oral Cavity

THE LIPS

Cleft lip

The incidence of cleft lip is approximately one in every 750 live births. A single lateral cleft is usually present varying in depth from an indentation in the vermilion border to a complete defect of the whole upper lip. The cleft may be bilateral radiating into the base of each nostril with a central protuberance of the midline remnant.

Cleft palate

The cleft may extend through the alveolus, the hard palate and the entire soft palate. The primary palate extends to the incisive foramen beyond which is the secondary palate. Clefts are divided into partial or complete defects of the primary or secondary palate in various combinations. The most common varieties are left-sided, unilateral complete clefts of the primary and secondary palate and partial midline clefts of the secondary palate, involving the soft palate and part of the hard palate.

Feeding problems are common with cleft lip and cleft palate and breast feeding may be impossible.

TREATMENT

Closure of the lip defect is usually carried out after the tenth week of life providing that the body weight is at least ten pounds. The Millard rotation advancement operation is most commonly used for unilateral defects. In this operation an incision is made in the medial side of the cleft to allow rotation of the anterior aspect of the lip into the normal position. The resulting gap is closed by advancing a flap from the lateral side. For bilateral defects the Manchester repair involves approximation of the central and lateral lip elements in a straight line closure, rolling up the vermilion border of the lip. The prolabium rapidly grows after the repair providing the entire length of the lip. A secondary plastic procedure may be necessary at a later date taking the form of either a V-Y or Z plasty.

The repair of the palatal defect is usually deferred to a time between the first and second years of life when more tissue is available for closure but speech development has not yet begun. If insufficient tissue exists for closure, a dental prosthesis may be required. A plastic procedure is used to close the defect in the soft palate.

Peutz–Jeghers Syndrome

In this condition oral pigmentation is associated with intestinal polyposis. Blackish-brown pigmented spots are present around the vermilion surfaces of the lips and on the buccal mucosa. The condition is described in Chapter 13.

STOMATITIS

The term stomatitis is used in general to describe diffuse inflammatory conditions of the mouth. These may be infective, thermal, chemical or traumatic.

Angular stomatitis

Angular stomatitis is a condition of superficial ulceration at the corners of the mouth associated with pigmentation and superficial scabbing. The lateral cracks are often referred to as cheilosis.

The disorder may occur in children of school age when it is referred to as perlèche. Secondary infection with streptococci and *Candida albicans* occurs. Excessive sucking of the fingers or thumb may produce similar lesions. The condition heals without scarring when treated by attention to oral hygiene and adequate nutrition.

Vitamin B deficiency, in particular ariboflavinosis, is prone to produce angular cheilosis and occurs in the elderly and undernourished. Overclosure of the lips in the edentulous is a causative factor.

Infective stomatitis

Infective stomatitis may be produced by the following organisms.

1 Herpetic labialis and stomatitis. Primary and recurrent labial herpes resulting from infection by herpes simplex virus produce vesicles and superficial ulceration of the lips, buccal mucosa and tongue. Recurrent bouts of exacerbation with spontaneous remissions occur. Application of Idoxuridine may be helpful.

2 *Borrelia vincenti* and *Fusiformis fusiformis* cause Vincent's angina which is an ulcerating membranous gingivitis and stomatitis produced by an anaerobic

spirochaete and a fusiform anaerobic spindle-shaped rod. The gums are the focal point of the disorder, becoming painful, haemorrhagic and ulcerated. The condition manifests itself in early adult life usually under the age of 40 years. Pseudomembranes form over the ulcers and the inflammation spreads to involve the mouth, fauces and pharynx with, in addition, a cervical lymphadenopathy. Treatment is with frequent mouthwashes, oral hygiene, topical hydrogen peroxide and penicillin.

3 Pyogenic organisms such as staphylococci, streptococci and gonococci may be responsible for infective stomatitis and these respond to antibiotic therapy and mouthwashes.

4 *Candida albicans* causes candidiasis (thrush). This organism is a normal commensal of the oral cavity which tends to proliferate and produce pathogenic effects in debilitated patients and those who have been treated by antibiotics. The disorder is characterized by whitish plaques adherent to the buccal mucosa which are surrounded by erythematous rings. Spread may occur down the oesophagus. The treatment is with nystatin.

5 Foot and mouth disease caused by a virus transmitted from cattle produces vesicles on the lips and buccal mucosa. The vesicles rupture leaving shallow ulcers which soon heal spontaneously.

Aphthous ulceration

Recurrent aphthous ulcers are common; most individuals at some time in their life will suffer from them. Aphthous ulceration occurs on the inner surfaces of the lips, the buccal mucosa and the tongue. The incidence is greater in females than in males. These ulcers are not contagious but there does tend to be a familial predisposition. The aetiology is unknown, however the disorder is more common in coeliac disease, probably in Crohn's disease and in ulcerative colitis. Smoking tends to exacerbate the problem, particularly pipe smoking, and ulceration may follow trauma to the mucous membranes. Stress may also be an exacerbating factor. The early colonic mucosal lesions in Crohn's disease resemble aphthous ulcers.

The ulcers are usually single but may be multiple. They are painful and run a self-limiting course of one to two weeks.

Treatment is by improving oral hygiene, local analgesic gel preparations and the application of steroid pellets such as Corlan pellets (hydrocortisone 2.5 mg). Tetracycline mouthwashes have been stated to have a role, also oestrogens may be helpful in females suffering from repeated attacks.

CROHN'S DISEASE

Crohn's disease of the mouth may present with raised, tender erythematous linear lesions often affecting the floor of the mouth or the buccal mucosa (Fig. 1.1). The lesions closely resemble aphthoid ulcers.

Fig. 1.1 Oral Crohn's disease.

Rhagades

The white linear streaks of rhagades emanating from the corner of the mouth suggest previous syphilitic infection, and primary syphilitic chancre may arise on the lip.

Boils and carbuncles

Boils and carbuncles may occur on the lips and may be associated with a spreading cellulitis. Occasionally cavernous sinus thrombosis may complicate these infections.

Cancrum oris

This uncommon inflammatory disorder is a complication of severe and debilitating disorders such as leukaemia and other forms of malignancy. The probable mechanism is that of a synergistic infection with a number of organisms leading to compromised tissue viability and subsequent gangrene. Large areas of tissue destruction occur with a severe systemic reaction. Septicaemia tends to ensue. The condition is virtually never encountered in westernized countries but still occurs in Central Africa, Asia and South America.

CYSTIC SWELLINGS OF THE LIPS AND MOUTH

Retention cysts of the buccal mucous glands

Large translucent swellings which are painless and are not inflamed are produced by retention cysts of the buccal mucous glands. The swellings require excision in view of the large dimensions which they can achieve.

Ranula

A ranula is a transparent retention cyst of the submandibular or sublingual glands or ducts. Gradual enlargement occurs and deep penetration into the floor of the mouth may ensue leading to a palpable swelling below the mandible. Sometimes multiple ramifications occur. Treatment is by complete excision whenever possible. The cysts contain rather dense gelatinous fluid.

Cavernous haemangiomata

Cavernous haemangiomata may occur anywhere in the mouth; they are cystic swellings darkly coloured by the blood within.

Sublingual dermoid

Sublingual dermoids are congenital swellings of the floor of the mouth and may be situated in the midline (median sublingual dermoid) or lie laterally. They present usually in the late teens as a painless swelling with a thin wall and contain sebaceous material. Whilst usually situated above the mylohyoid, they occasionally extend below it in the submental triangle. The major differential diagnosis of the midline swelling is between a thyroglossal cyst and ectopic thyroid tissue.

Treatment is by excision through a submandibular approach.

LEUCOPLAKIA

The white patches of leucoplakia which line the oral cavity vary in severity from a simple keratosis, arising as a response to mild irritation, to a hyperkeratotic lesion, sometimes progressing to a carcinoma in situ.

Approximately 10% of patients with leucoplakia progress to carcinoma. The lesion is most common in males usually over the age of 60 years; the buccal mucosa, tongue, lips and palate are commonly involved. Irritation

produced by tobacco, alcohol and ill-fitting dentures is the most common precipitating factor.

TUMOURS

Carcinoma of the lip

The lower lip is involved in over 95% of cases. The initial changes are those of a flattened ulcer on the vermilion surface usually close to the midline and surrounded by a degree of acute inflammatory reaction. The condition accounts for about 25% of oral malignant tumours. The vast majority are squamous cell carcinomas.

Cancer of the lip is more common in males than females and is associated with smoking and exposure to sunlight. It is a disorder of the elderly, being rare below the age of 60 years. Lymph node spread occurs at an early stage; the submental, submaxillary and later deep cervical nodes become involved.

TREATMENT

Small lesions are excised with an adequate margin of normal tissue. Block dissection of the lymphatic field is essential when lymph nodes are involved. Radiotherapy is a useful adjunct to surgery but may be used as a primary treatment. Lesions of less than 2 cm diameter respond well to treatment, the five year survival rate being approximately 90%. When there is lymph node involvement the survival rate falls to less than 50% at five years.

Papillomas, polyps, lipomas and haemangiomas may occur anywhere inside the mouth. They are slow growing and respond to local excision.

Carcinoma of the buccal mucosa

Tumours of the oral mucosa tend to be well differentiated and locally infiltrating. They may become ulcerated and are squamous cell carcinomas, being somewhat slow to metastasize.

TREATMENT

Small lesions are amenable to local excision. Larger deeply infiltrating neoplasms require more radical excision with plastic reconstruction of the face. Block dissection of the cervical lymph nodes may be necessary. The tumours respond well to treatment with radiotherapy, either primary or as an adjunct to surgery.

Carcinomas of the floor of the mouth are usually squamous cell lesions which

are slow growing but eventually spread to local lymph nodes. Treatment is by local excision in conjunction with radiotherapy. Five year survival rates depend upon the extent of the tumour at the time of detection and treatment. With small tumours the prognosis is excellent; larger tumours with lymph node metastases have five year survival rates of about 25%.

Carcinoma of the gums

Tumours on the gums form approximately 10% of all oral malignant tumours. They most commonly occur along the molar region of the lower jaw. These tumours though well differentiated become ulcerated and spread rapidly, often invading the mandible. Metastatic spread is to the submandibular nodes.

Carcinoma of the hard palate

Tumours of the hard palate are extremely uncommon in western countries, however, minor salivary gland tumours can occur at this site. Of these, 40% are adenoid cystic carcinomas, 25% adenocarcinomas, 20% mucoepidermoid carcinomas, the remainder being squamous in origin. These tumours metastasize late but bone involvement can be extensive. Lymphatic metastases occur to the retropharyngeal, submaxillary and digastric lymph nodes.

TREATMENT

Treatment is by wide surgical excision and prosthetic replacement to occupy the defect.

Carcinoma of the soft palate

Carcinomas of the soft palate are slow-growing, well-differentiated tumours which become locally invasive. Lymphatic involvement tends to be late but is of serious importance, representing a major deleterious change in the overall prognosis. The uvula is a common site of tumour formation which occurs as an ulcerating lesion therein.

TREATMENT

Treatment is by wide surgical excision, radiotherapy or both. When tumours are over 3 cm in diameter the prognosis is grave; less than 20% of patients being alive at five years.

THE TONGUE

Lesions of the tongue and pharynx will not be dealt with in detail in this text except in so far as they may signify or herald disorders of the gastrointestinal tract.

Fissuring of the tongue

This may be congenital when it presents as transverse furrows centred on the midline of the tongue occurring at about the age of five years and persisting thereafter. The fissures may be deep but are not associated with inflammation. Longitudinal fissures are often associated with syphilis whence the epithelial covering of the tongue becomes largely denuded. Ariboflavinosis produces deep longitudinally disposed fissures with a dark red base; they are usually associated with angular stomatitis.

MEDIAN RHOMBOID GLOSSITIS

In median rhomboid glossitis situated centrally on the dorsum of the tongue is an erythematous raised, smooth, slightly indurated, rhomboid-shaped swelling. This is probably a congenital defect related to the tuberculum impar. It is entirely benign and of no clinical importance though it may be mistaken for a carcinoma of the tongue.

LINGUAL THYROID

Ectopic thyroid tissue may rest at the foramen caecum, or anywhere along the thyroglossal tract. It may thus present as a prominent lobulated swelling.

HERPES

Herpes infection of the tongue can produce a glossitis particularly of the edge of the tongue.

GEOGRAPHICAL TONGUE

Geographical tongue is a symptomless patchy erythematous condition of the tongue with denuded areas of epithelium surrounded by a yellowish-white border appearing like the coastline on a map. The contours change rapidly, giving rise to a completely different configuration. The condition may occur as a complication of antibiotic therapy but its aetiology is unknown. No treatment is required other than reassurance.