ORAL MEDICINE

Tuberculosis

BACKGROUND

Tuberculosis (TB) is both preventable and curable but presents a distinct hazard to oral health care providers because of the way it is transmitted, the presence of drug-resistant strains of mycobacterium tuberculosis, and the risk factors that have recently emerged related to the disease. Usually TB affects the lungs, pleural cavity, mediastinal lymph nodes, or larynx and is known as pulmonary TB. However, it can also infect other parts of the body (extra-pulmonary TB). Health care providers are mandated by law in many countries to report TB cases, whether suspected or confirmed. Most cases occur among people who migrate to countries such as the United Kingdom or the United States from areas of the world where TB is more common, such as South Asia and sub-Saharan Africa. The most deprived communities tend to be where TB cases are concentrated. The facts concerning TB and implications for patient care and management relative to the dental team were discussed.

TB PROFILE AND TREATMENT

TB can be latent or active. Patients with latent disease tend to be asymptomatic and cannot transmit the disease to others. About 10% of those with latent disease will progress to active disease, when they can transmit TB (Table 2).

Oral lesions of TB are uncommon and often overlooked when performing a differential diagnosis. The stellate ulcer is pathognomonic for the disease, but TB can present with facial swelling, gingival enlargement, patches and lesions of the jaws, or radiolucencies of the bone.

The diagnostic process produces many false-positive results. In addition, the onset of TB can be subtle, making the diagnosis difficult.

Treatment requires a specialist team that is often from multiple disciplines of both health care and social care. If the diagnosis and treatment are delayed, the outcome tends to be less favorable for the individual and offer a greater risk for transmission to others.

In most cases, those diagnosed with TB are given 6 months of outpatient antimicrobial therapy, with 8 weeks of rifampicin, isoniazid, and pyrazinamide combined with ethambutol or streptomycin, then 16 weeks of rifampicin and isoniazid. Patients may also take pyridoxine to prevent neuropathy. Infectivity falls significantly during the first 2 weeks of therapy. However, the TB team will also need to contact close contacts and determine their risk for infection, then institute treatment as indicated. Should the disease prove to be drug-resistant TB, additional measures will be required.

IMPLICATIONS FOR THE DENTAL CARE TEAM

General Considerations

The dental team must provide the same high standard of care for patients with infectious diseases as it does for patients without these disorders. For all patients, an infection control policy should be observed. A copy of the written plan should be kept in the office for referral. Standard infection control protocols must be followed. In addition, when new employees are hired, they should undergo a complete standard health clearance check, which should be spelled out in job descriptions and application packages. The BCG vaccine is given to individuals who are at particularly high risk, such as health care workers who have a negative tuberculin skin test or interferon gamma test and have not been previously vaccinated. If vaccination is declined, the risks should be clearly explained to the individual, then he or she should be limited in their scope of duties to areas devoid of any risk of exposure to TB.

Table 2. Summary of Clinical and Diagnostic Features of Latent and Active Pulmonary TB

Feature	BCG Vaccinated	Latent TB	Active TB		Treated TB
Symptoms	None	None	Asymptomatic (25%)	Symptomatic (75%) Persistent cough >3 weeks Haemoptysis Pain on breathing Malaise Weight loss Night sweats	None
Risk of infection	None	None	Yes – droplets in aerosol		None

(Courtesy of Clough S, Shaw A, Morgan C: Tuberculosis and oral healthcare provision. *Br Dent J* 224:931-936, 2018.)

Table 5. Summary of Additional Precautions in Active and Suspected TB

Additional precaution	Comment
Minimise aerosol	Avoid handpieces with water spray Turn on high volume suction prior to handpieces (if necessary) Use rubber dam when possible
Environment	Negative pressure room (ideal) Well ventilated, not with air conditioning
Personal protection	FFP3 face mask Promote respiratory hygiene
Timing	Infection risk is significantly reduced after the completion of 2 weeks of TB therapy End of the session to minimise risk of transmission Keep waiting time in public area minimal
Team	Vaccinated members of staff
Modality	May be limited to treatment under local anaesthesia Treatment under conscious sedation or general anaesthesia warrants further discussion with local infection control and anaesthetic teams

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New patients should also be screened. They should complete a medical and social history and update the information regularly.

Treating a Patient with TB

When TB is suspected or confirmed in a patient, special attention must be paid to areas such as personal protection, decontamination, and treatment concerns. With respect to personal protection, health care professionals should observe basic cough etiquette to reduce transmission risks. It's also important to ensure infection control procedures are followed, which should include hand hygiene, wearing gloves and clothing with access to the forearms, and using disposable aprons, eye protection, and face masks. With respect to decontamination of medical equipment, no instances have documented TB transmission related to medical equipment.

Treatment with the patient under conscious sedation or general anesthesia is often too complex for patients with active pulmonary TB. Should general anesthesia be required, planning with an anesthetic aide, theatre staff, and additional care options to manage humidification of the breathing system or other special measures must be part of the process (Table 5).

If the treatment will be delivered with local infection control and anesthetic teams, the patient must be monitored for respiratory depression and the need for increased oxygenation. The dentist should ensure that the patient is not given medications that might interact with concurrent TB treatment.

Clinical Significance

Countries such as the United Kingdom are seeing a resurgence in the occurrence of TB and having to deal with the public health problems that result from this development. The dental team should be prepared to manage this infectious disease, as well as all the others that patients may have, and follow proper protocols in all cases. If the dental practice works with especially vulnerable groups of patients in high-risk areas, proper equipment should be on hand to help in managing patients with active infection and to ensure that transmission to either other dental team members or other patients does not occur.

Clough S, Shaw A, Morgan C: Tuberculosis and oral healthcare provision. *Br Dent J* 224:931-936, 2018

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Eating disorders

BACKGROUND

Eating disorders (EDs) are considered psychiatric problems and result from a complex interplay of factors. The major disorders in this classification are anorexia nervosa (AN), which is characterized by a body mass index (BMI) under 17.5 Kg/m^2 and a sustained loss of weight, and bulimia nervosa (BN), which is defined as a BMI above 17.5 Kg/m^2 and recurrent episodes of binge eating. Both AN and BN can be subdivided into a restrictive type, where the weight loss is accomplished through food intake reduction, prolonged fasting, and excessive physical activity, or a