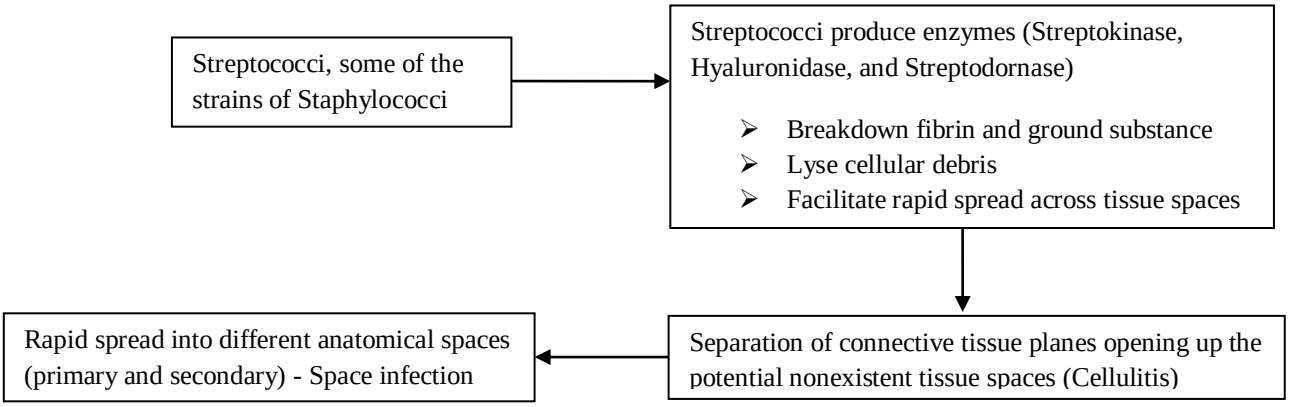
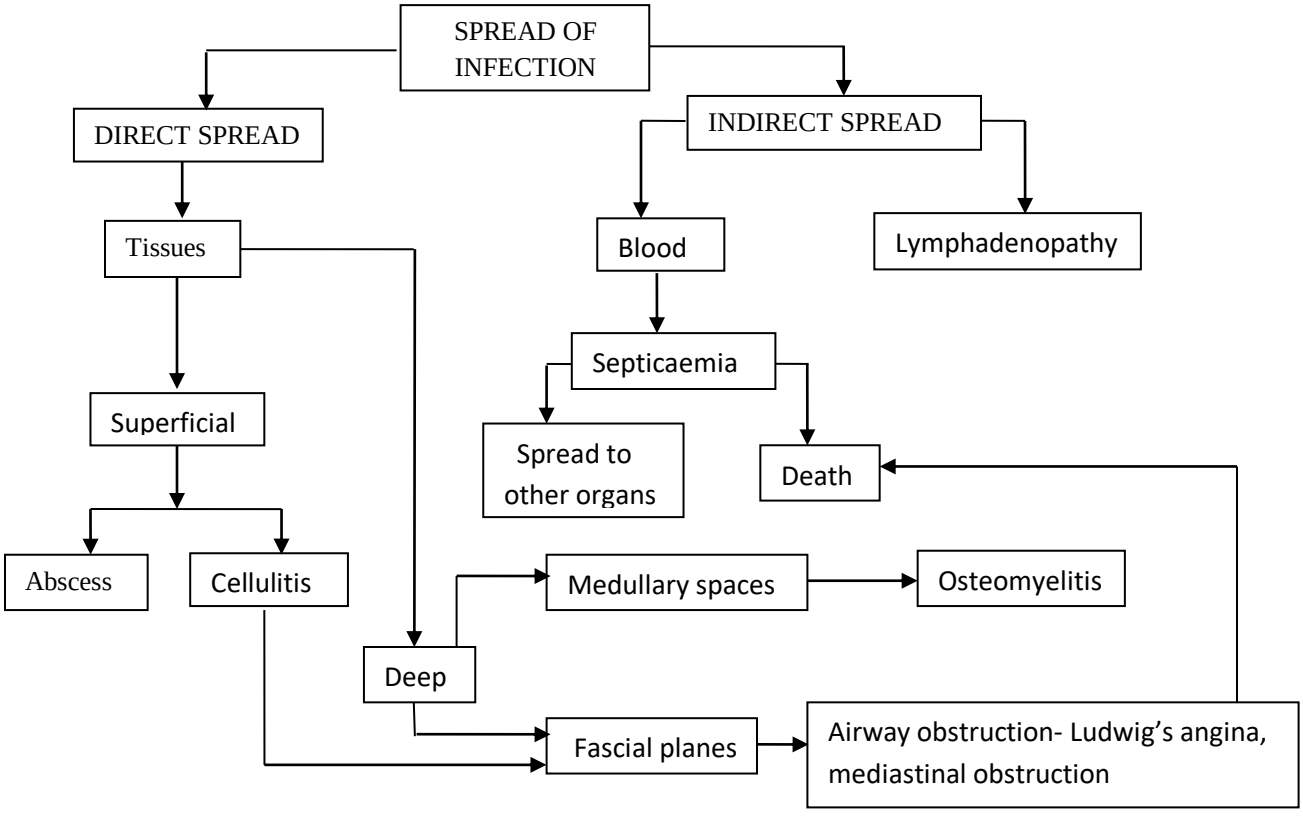
SPREAD OF ODONTOGENIC INFECTIONS AND MANAGEMENT

MECHANISM OF SPREAD OF INFECTION

- Originates in PULP or PERIODONTAL TISSUES
- Type and Virulence of microorganisms involved and the immunological conditions of the patient influence the degree of spread of infection
- To a greater degree muscle attachment determines the route taken by the infection





MANAGEMENT OF ODONTOGENIC INFECTION

1. TREATMENT OF THE CAUSE - Tooth extraction, evacuation of pus in case of abscess in extra oral space infection
2. INCISION AND DRAINAGE – In case of space infections (1º, 2º), Nonsuppurative space infection (Ludwig's angina)
3. ANTIBIOTIC THERAPY – First choice therapy- synthetic penicillin, cephalosporin, Amoxicillin/Clavulanic acid
   Other alternatives- Clindamycin
4. SUPPORTIVE THERAPY – Patient with facial cellulitis may require complementary measures in severe cases
   Analgesics, NSAIDs and nutritional support is mandatory
   Respiratory impairment, Airway monitoring by endotracheal intubation should be checked
5. EXCISION OF SINUS – Elliptical incision made around its external orifice so that on closure the scar lies in Langer's line

LUDWIG'S ANGINA (Other names- Marbus strangulatorius, Angina maligna, Garrotillo)

First described by *Wilhelm Friedreich Von Ludwig* in 1836

Term 'Ludwig's angina' was coined by *Camerer* in 1837, presented classic case of Ludwig's angina

Classic case means definite bilateral movement of all the 3 spaces i.e submandibular, submental and sublingual spaces

Definition- It is a form of firm, acute, toxic and severe diffuse celluitis/ induration that spreads rapidly, bilaterally affecting the submandibular, sublingual and submental space.

Unique identity with three 'F' – was to be Feared, rarely become Fluctuant, was often Fatal

ETIOLOGY – Primarily of dental origin (Odontogenic)

Odontogenic infection, Traumatic injuries of orofacial region, Submandibular and sublingual sialadenitis,

Secondary infection of oral malignancies, Pharyngeal infection or tonsillitis, Cervical lymphoid tissues,

Iatrogenic (contaminated needles), Miscellaneous (foreign bodies such as fish bone)

Pseudo Ludwig's angina term is applied to cases of non dental origin

CLINICAL FEATURES

General examination-

Marked pyrexia, Dysphagia, Impaired speech and hoarseness of voice

Extra oral examination-

Bilateral suprahyoid swelling with hard cardboard like consistency, non pitting, non fluctuating, tender on palpation, airway obstruction and cyanosis due to hypoxia, shallow breathing, mouth remains open due to oedema of sublingual tissues and there is resultant raised tongue with restricted movements, severe muscle spasm leading to trismus

Intra oral examination-

Elevation of tongue against palate, increased salivation, stiffness of tongue, drooling of saliva, airway obstruction, development of stridor

POTENTIAL COMPLICATIONS

Septicemia, Upper respiratory airway obstruction, Oedema of epiglottis, Thoracic empyema, Aspiration pneumonia, Vascular erosion, Cavernous sinus thrombosis with subsequent meningitis (rare)

DIAGNOSIS

Made on the basis of clinical findings

CT studies can help to determine the extent of infection, especially when there is abscess formation

TREATMENT

Should be considered as *Life threatening emergency*, early administration of antibiotics and prophylactic incision and drainages of spaces involved, airway must be controlled through surgical procedures (Cricothyroidectomy, Tracheostomy)

Surgical management- Bilateral drainage of submandibular spaces along with drainage of submental& sublingual spaces and by removal of the cause..

DISTANT SPREAD

Can occur by blood stream or lymphatics…