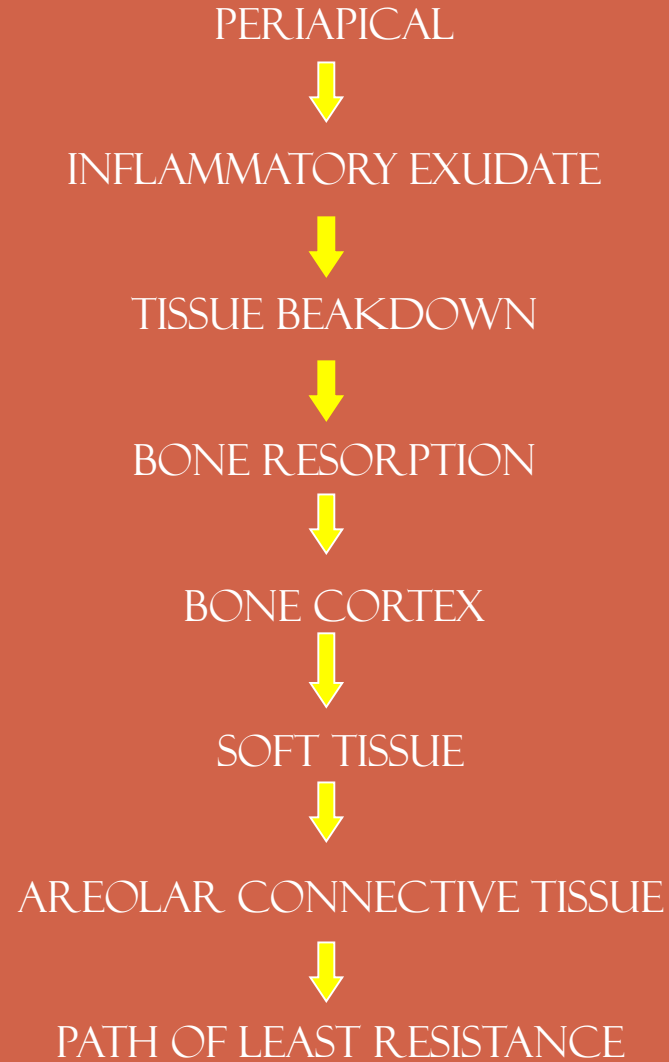


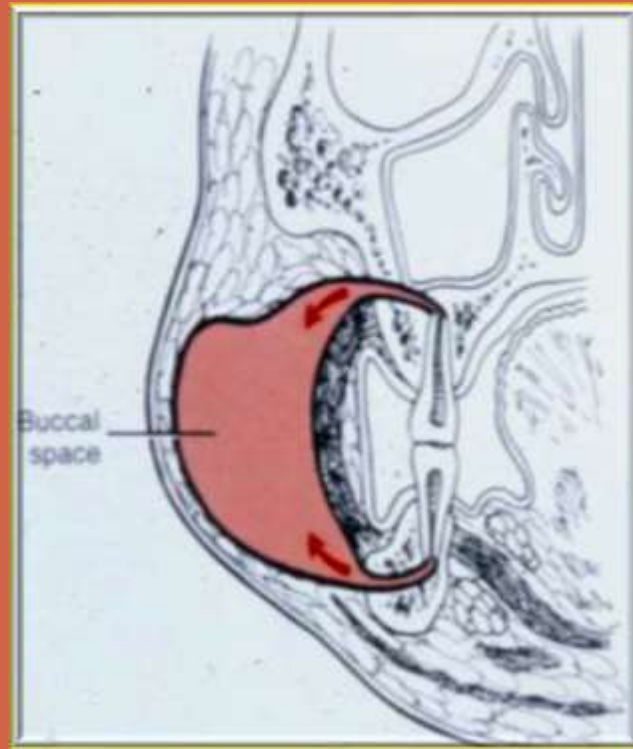
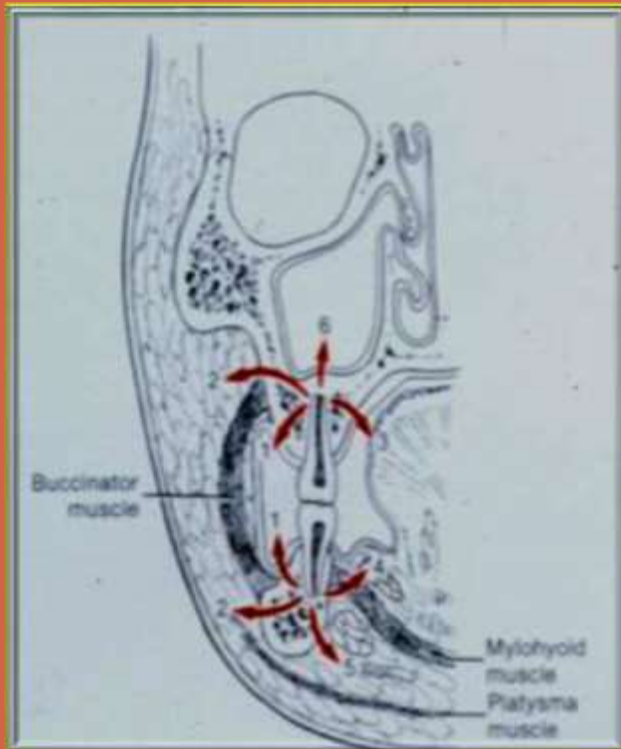
FASCIAL SPACES
AND
SPACE INFECTIONS

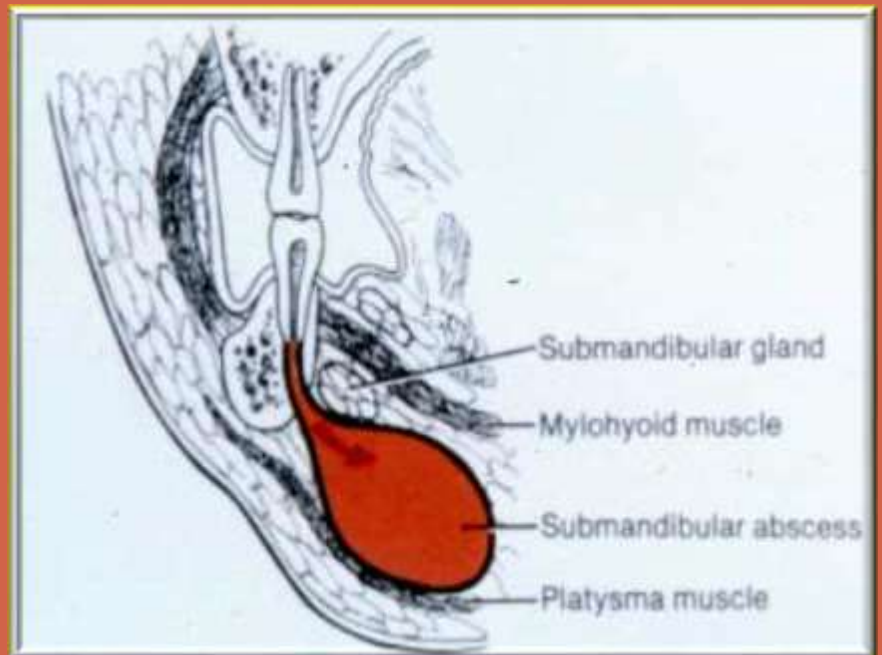
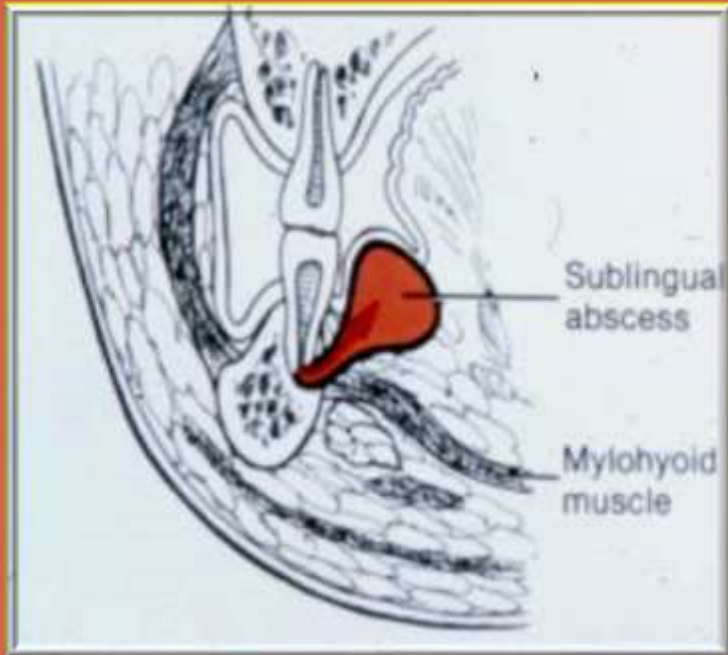
CONTENTS

- PATHWAYS
- PATHOPHYSIOLOGY
- STAGES OF INFECTION
- FASCIA
- CLASSIFICATION OF SPACES
- SPACES: PRIMARY & SECONDARY

PATHOPHYSIOLOGY







STAGES OF INFECTION

- INOCULATION
- CELLULITIS
- ABSCESS
- RESOLUTION

FASCIA

SUPERFICIAL FASCIA

DEEP CERVICAL FASCIA

ANTERIOR LAYER: INVESTING FASCIA

PAROTIDO-MASSETERIC FASCIA

TEMPORAL FASCIA

MIDDLE LAYER: STERNOHYOID-OMOHYOID DIVISION

STERNOTHYROID-THYROID

VISCERAL DIVISION

BUCCOPHARYNGEAL

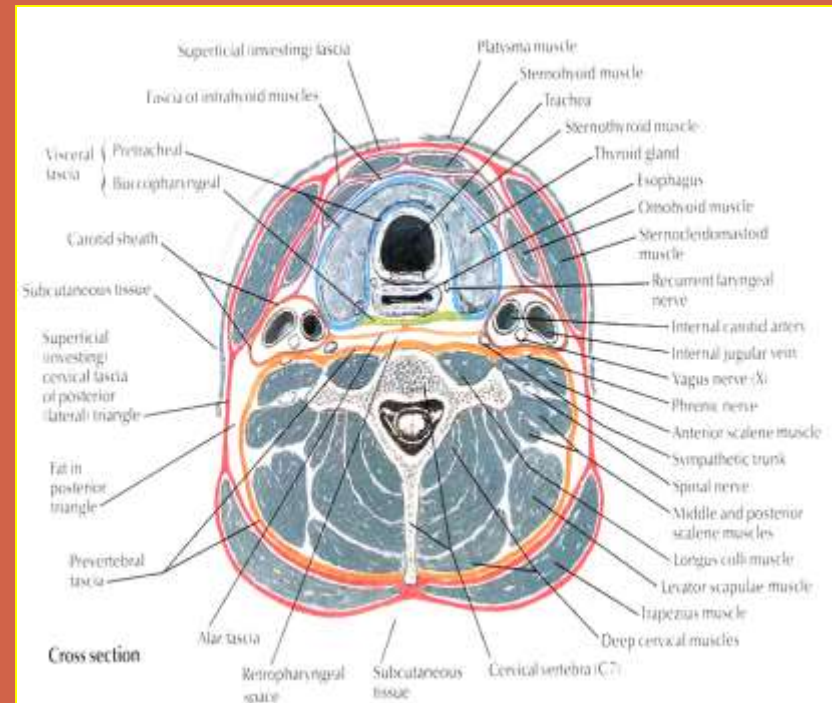
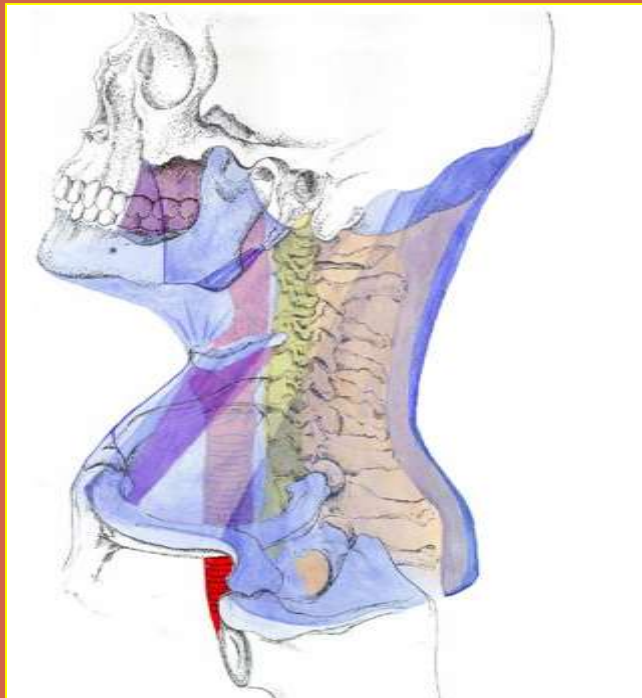
PRE-TRACHEAL

RETRO-PHARYNGEAL

POSTERIOR LAYER: ALAR DIVISION

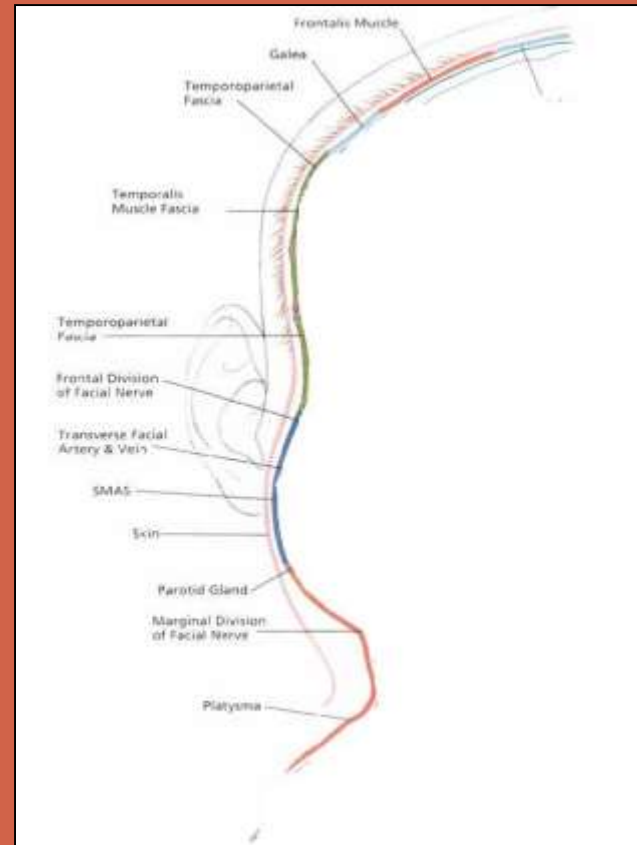
PRE-VERTEBRAL DIVISION

FASCIAL LAYERS



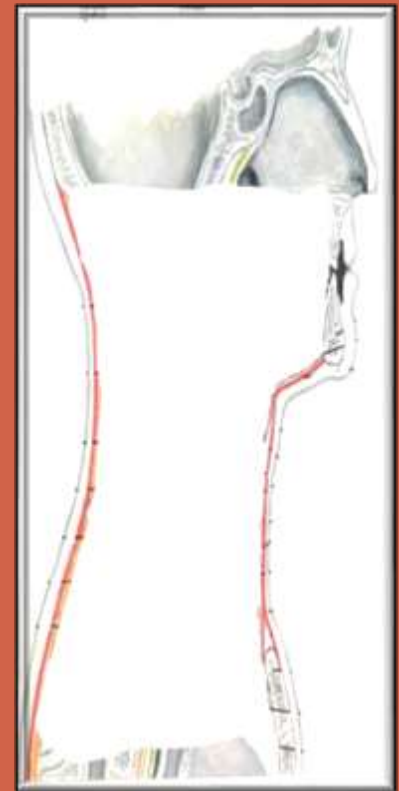
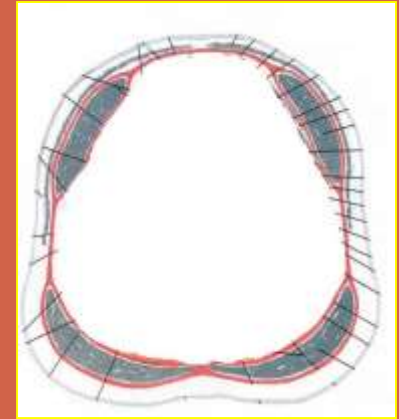
SUPERFICIAL FASCIA

- LAYER OF CONNECTIVE TISSUE
- COURSES DEEP TO SUBCUTANEOUS TISSUE
- SUPERIORLY ATTACHED TO ZYGOMATIC PROCESS
- INFERIORLY ATTACHED TO THORAX AND ABDOMEN



ANTERIOR LAYER OF DEEP CERVICAL FASCIA

- ALSO CALLED THE INVESTING LAYER.
- ENCLOSES THE STERNOCLEIDOMASTOID MUSCLE AND TRAPEZIUS MUSCLE
- FORMS THE BORDER OF SUBMANDIBULAR SPACE



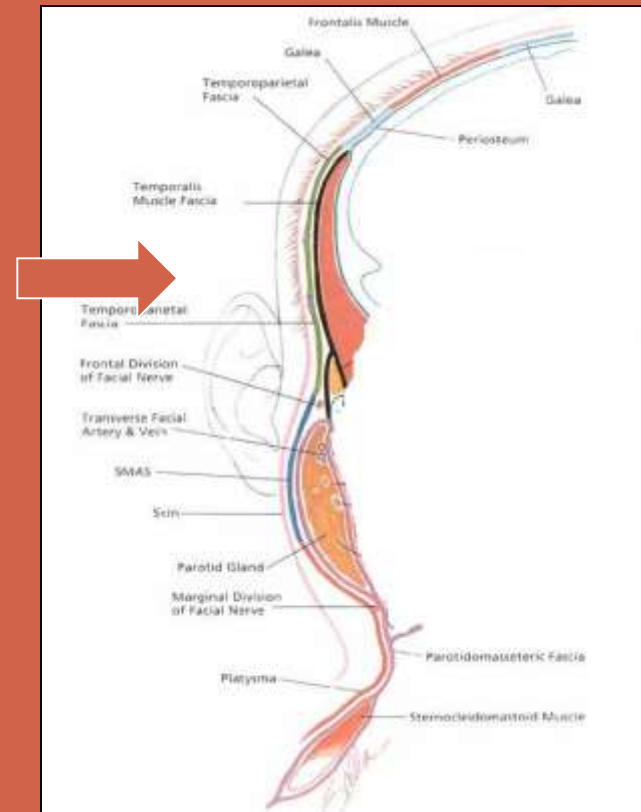
PAROTIDO-MASSETERIC FASCIA

- SPLITS AT THE MANDIBLE TO COVER THE MASSETER LATERALLY
- PAROTID GLAND POSTERIORLY
- MEDIAL PTERYGOID MUSCLE MEDIALY
- ATTACHES TO THE PTERYGOID PLATES AND SPHENOIDS



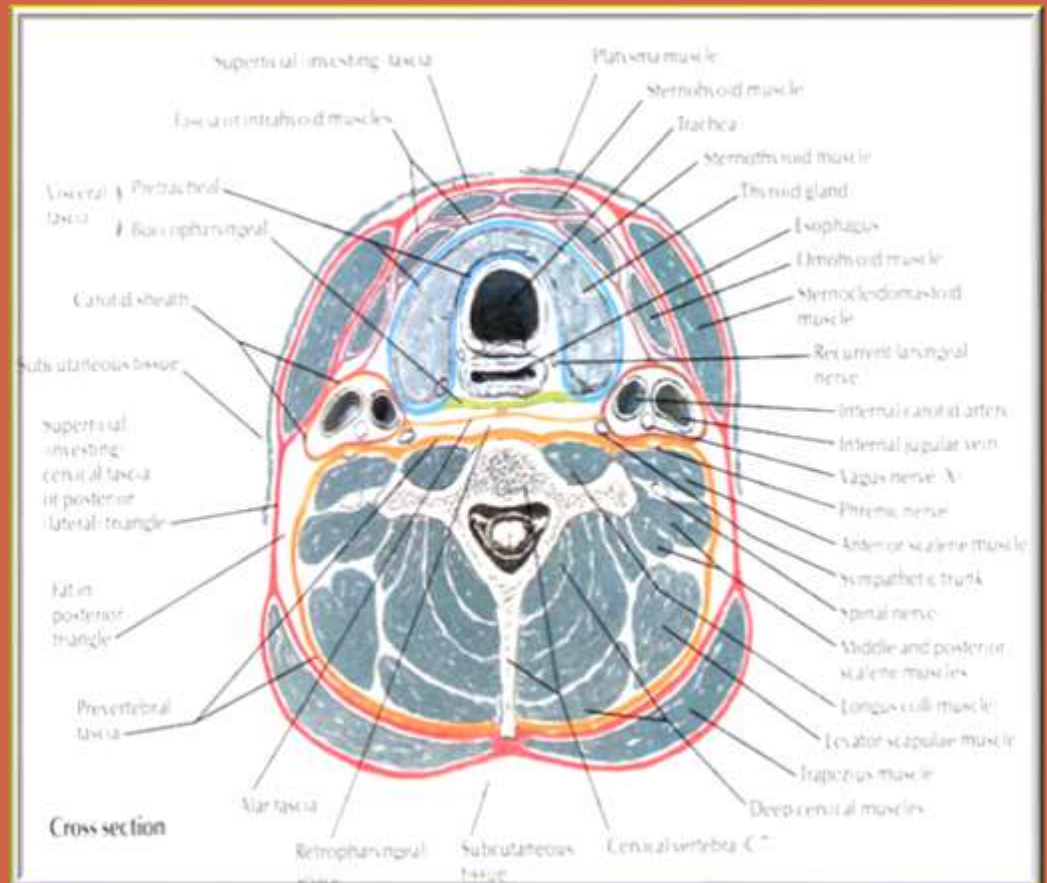
TEMPORALIS FASCIA

- ATTACHES TO PERIOSTEUM OF ZYGOMATIC ARCH AND RAISES ABOVE TO FORM THE TEMPORALIS FASCIA
- SPLITS TO INVOLVE TEMPORAL PAD OF FAT AND TERMINATES AT SUPERFICIAL TEMPORAL CREST



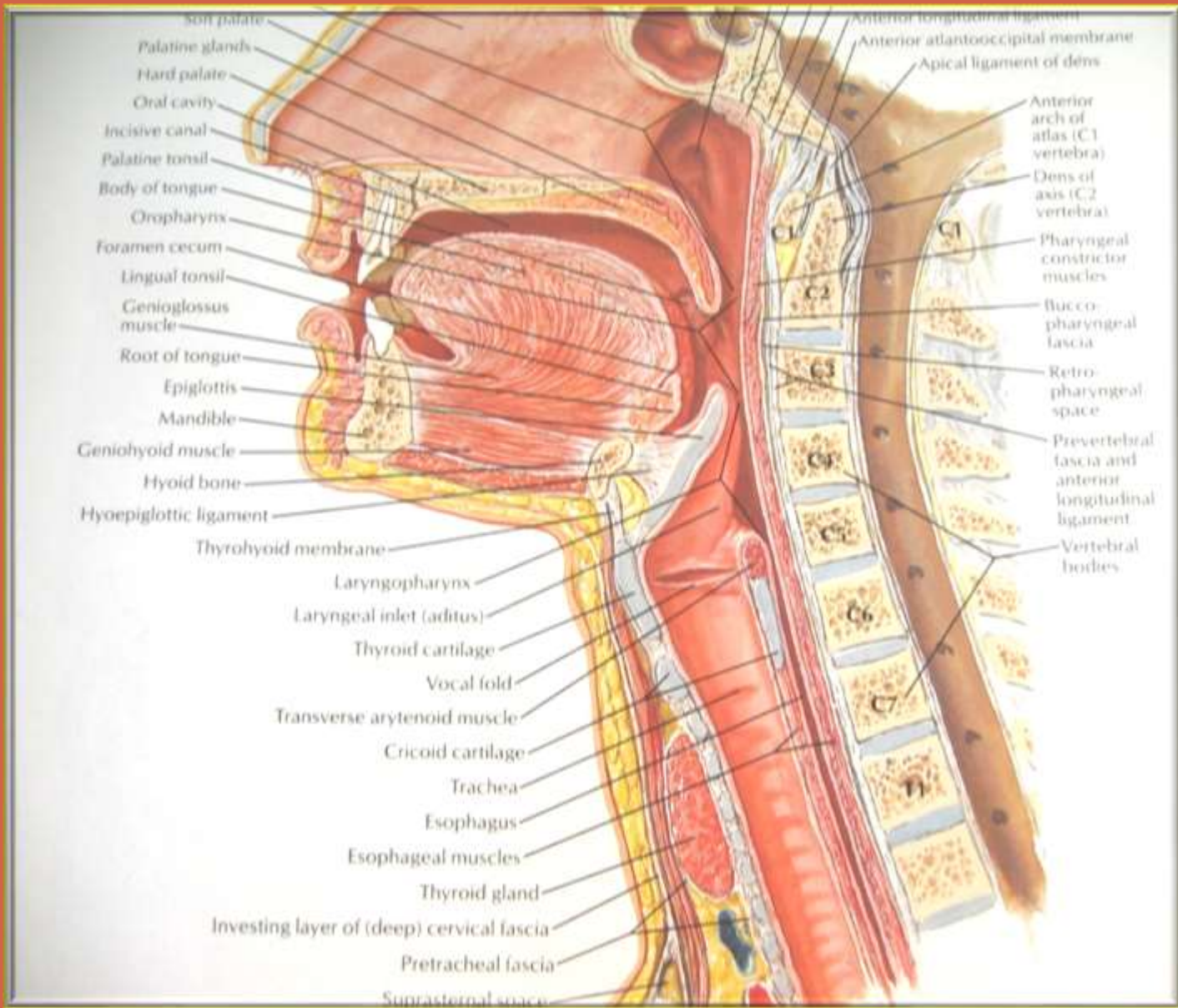
MIDDLE LAYER OF DEEP CERVICAL FASCIA

- LAYERS WHICH COVERS STRAP MUSCLES OF NECK
- IT SHOULD BE DISSECTED IN THE MIDLINE TO REACH THE TRACHEA OR THE THYROID
- DO NOT LIE IN ROUTE OF INFECTIONS



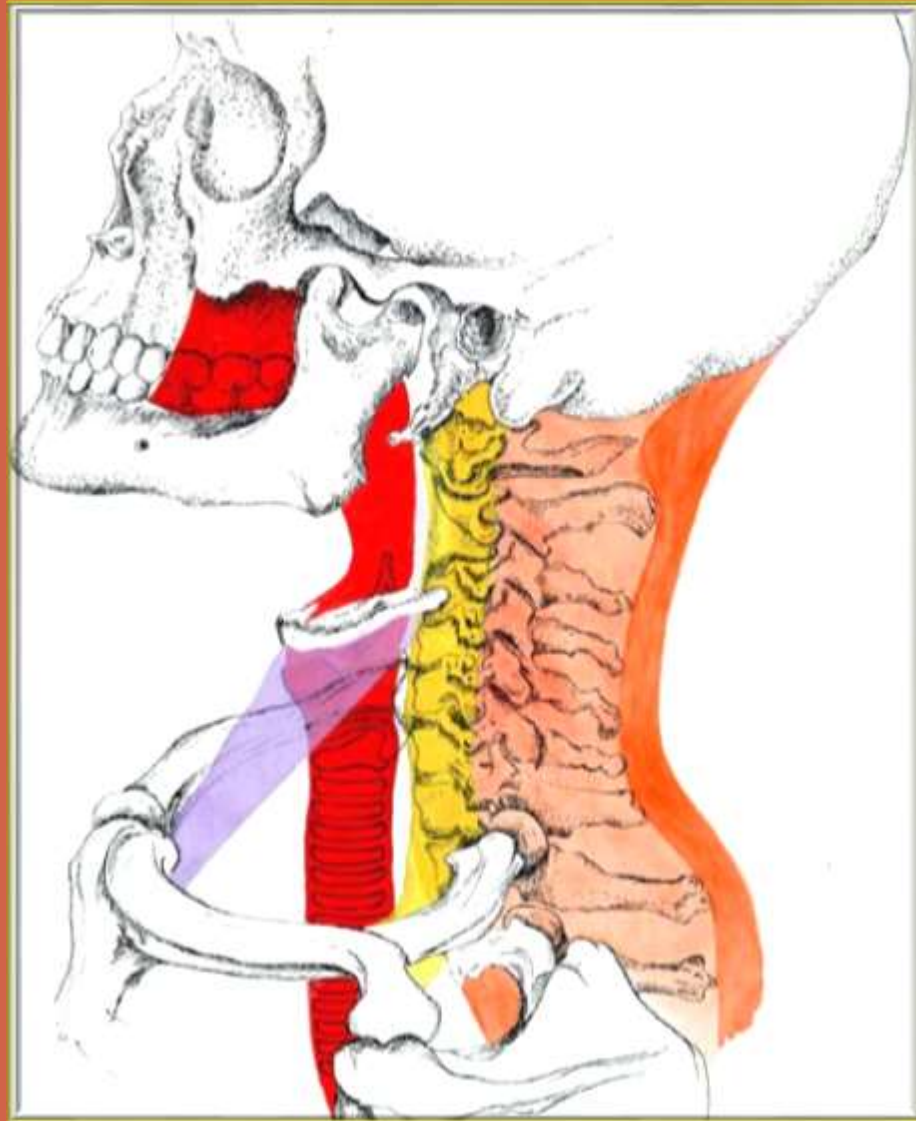
VISCERAL LAYER

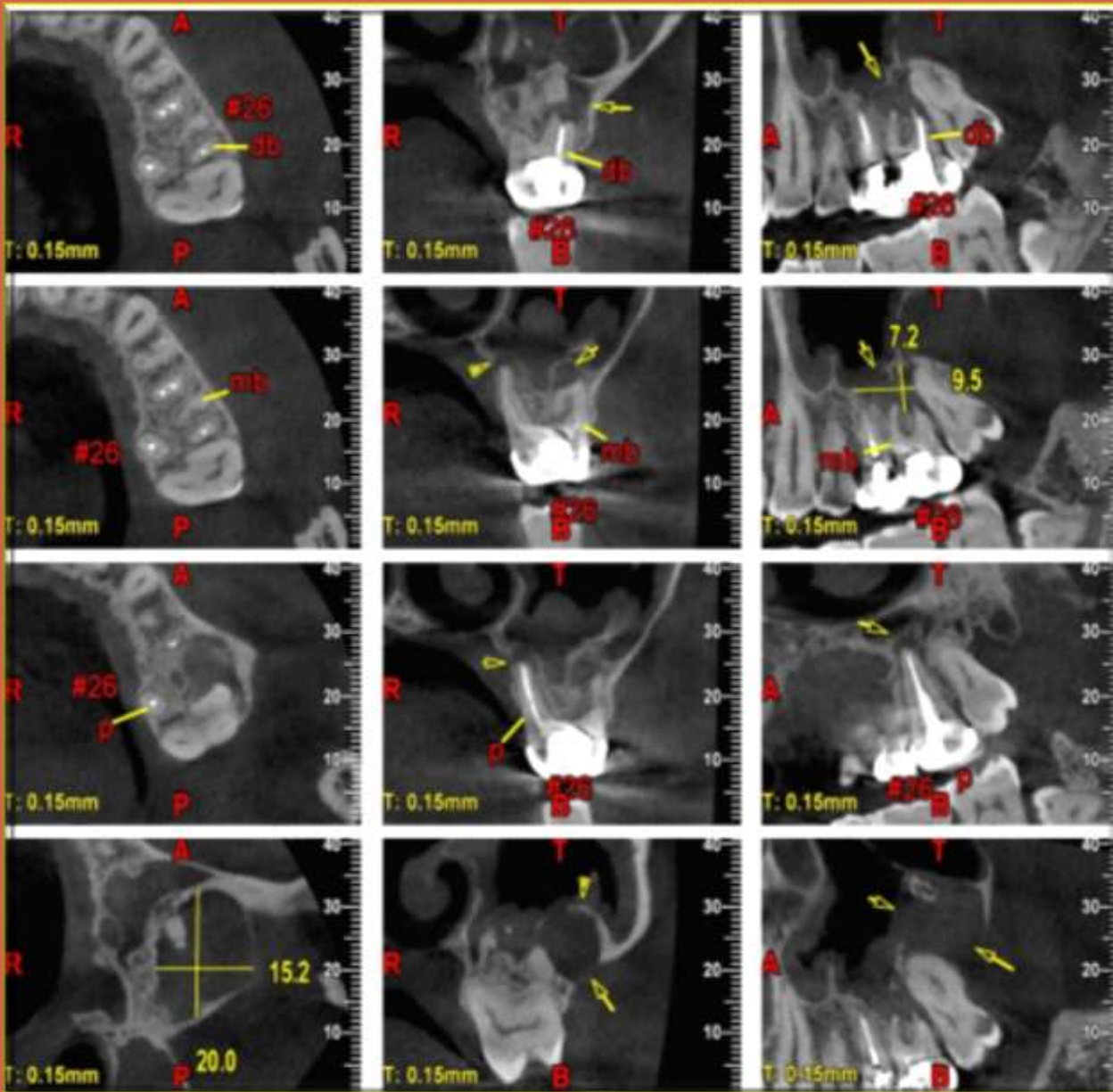
- ABOVE THE HYOID BONE WRAPS AROUND LATERAL AND POSTERIOR SIDES OF THE NECK
- IMPORTANT SPACES LIE HERE
- CALLED BUCCOPHARYNGEAL FASCIA
- BELOW HYOID BONE IT SURROUNDS TRACHEA ESOPHAGUS AND THYROID GLAND



POSTERIOR LAYER

- FORMS CAROTID SHEATH
- PREVERTEBRAL FASCIA INVESTS POSTERIOR NECK MUSCLES AND CERVICAL SPINAL COLUMN
- ALAR FASCIA FORMS INCOMPLETE PARTITION BETWEEN BUCCOPHARYNGEAL AND PREVERTEBRAL FASCIA





CLASSIFICATION OF SPACES

ACCORDING TO GRODINSKY

AND HOLYOK CLASSIFICATION

SPACE 1-

SUPERFICIAL TO SUPERFICIAL FASCIA

SPACE 2-

BETWEEN STERNOHYOID

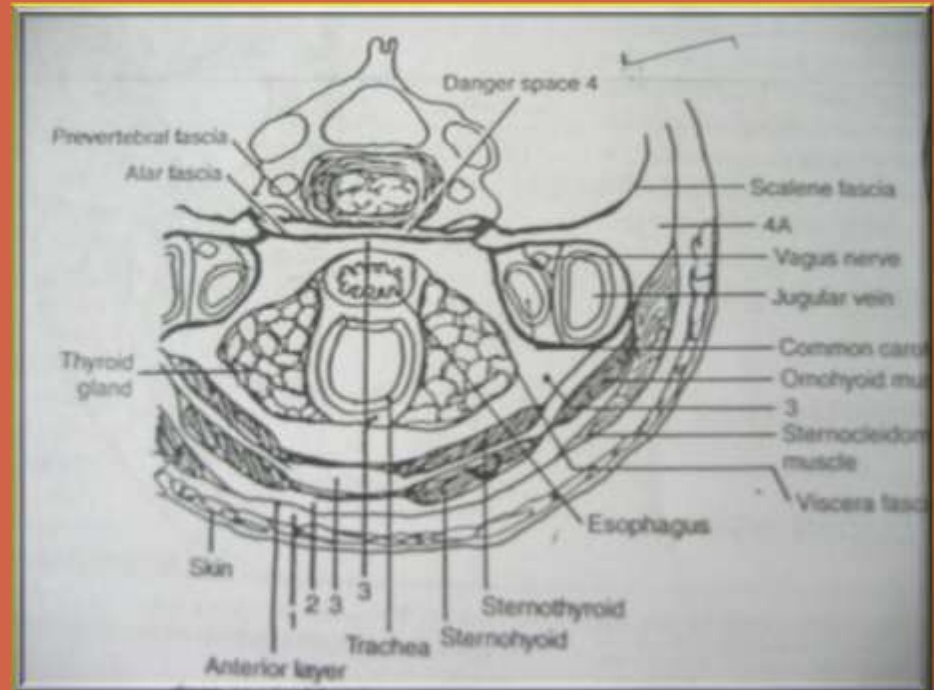
OMOHYOID &

STERNOHYOID AND THYROID

SPACE 3-

SUPERFICIAL TO VISCERAL DIVISION

SPACE 3A- CAROTID SHEATH



SPACE 4-

POTENTIAL SPACE THAT LIES
BETWEEN ALAR AND
PREVERTEBRAL DIVISIONS OF
POSTERIOE LAYER

SPACE 4A-

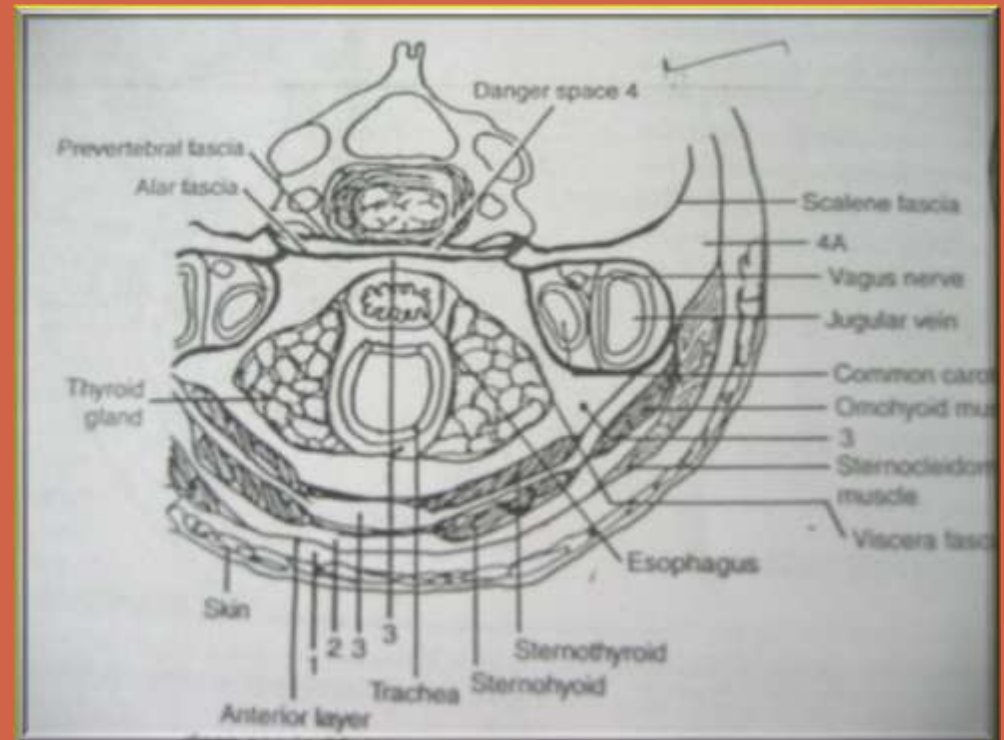
POSTERIOR TO CAROTID SHEATH

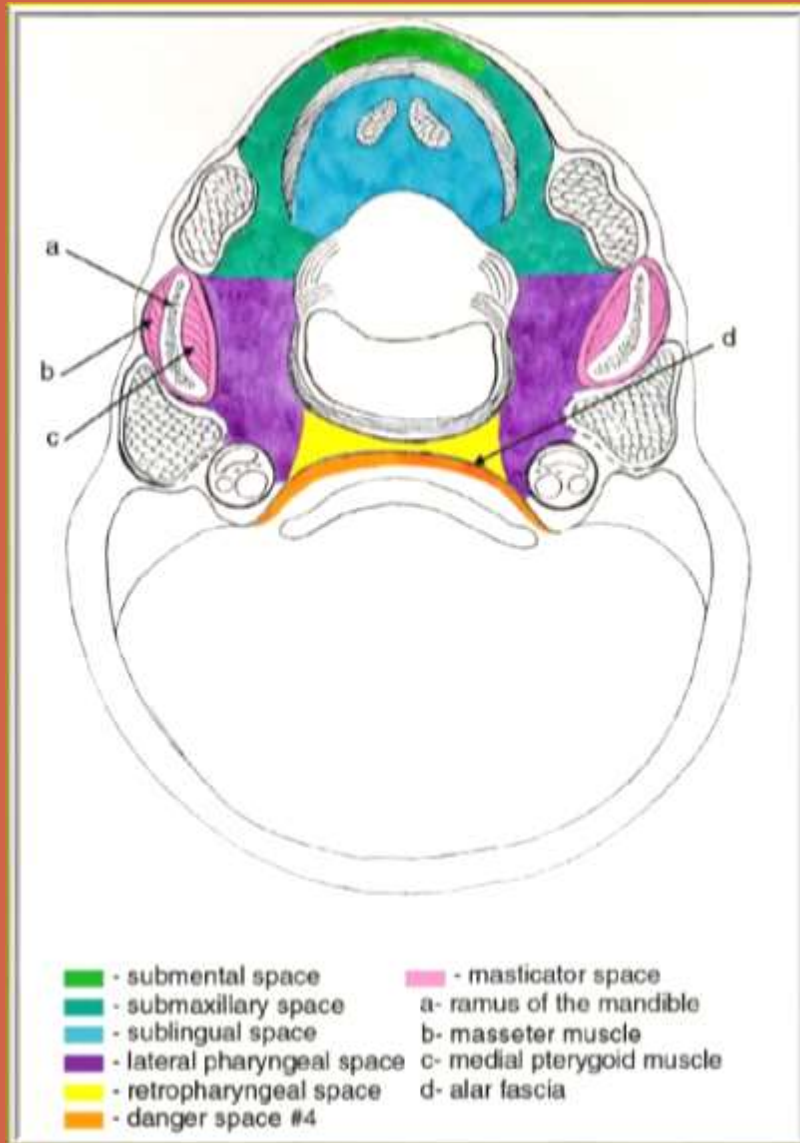
SPACE 5-

PREVERTEBRAL SPACE

SPACE 5A-

POSTERIOR TO TRANSVERSE
PROCESS OF VERTEBRAE

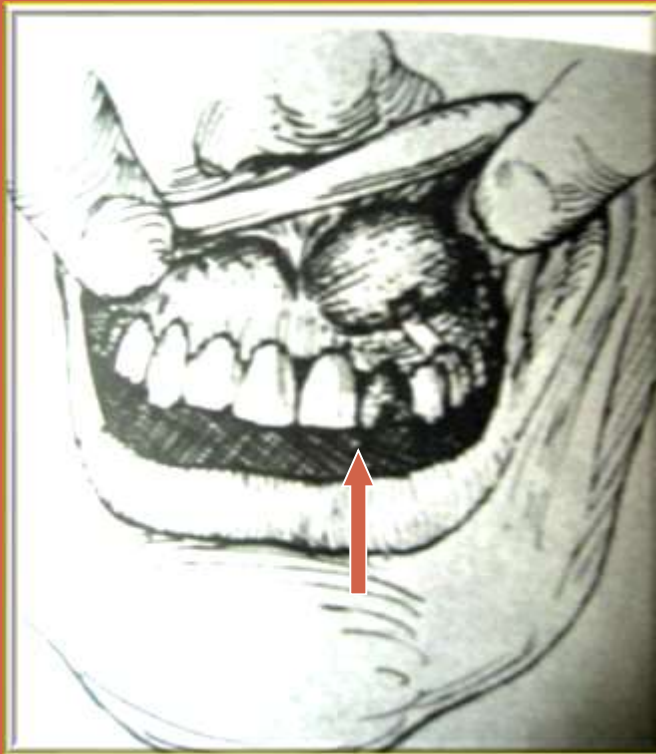




VESTIBULAR SPACE

- POTENTIAL SPACE BETWEEN THE ORAL MUCOSA AND MUSCLES OF FACIAL EXPRESSION
- POSTERIORLY LIMIT IS BUCCINATOR
- ANTERIORLY INTRINSIC MUSCLES OF EITHER LIP
- WELL LOCALISED DIFFUSE SWELLING IN THE BUCCAL VESTIBULE
- SWELLING MAY ELEVATE THE OVERLYING FACIAL STRUCTURES DUE TO EXIT OF DENTOALVEOLAR ABSCESSSES

VESTIBULAR SPACE



- TREATMENT
- EXTRACTION/ RCT
- INCISION OVER THE MAIN BODY OF THE EDEMATOUS TISSUE

PALATAL SPACE

- BETWEEN PALATINE MUCOSA AND PALATINE BONE
- ARISES FROM PALATAL ROOTS OF MAXILLARY PREMOLARS AND MOLARS
- WELL LOCALISED SWELLING
- EXTRACTION/ RCT
- INCISION

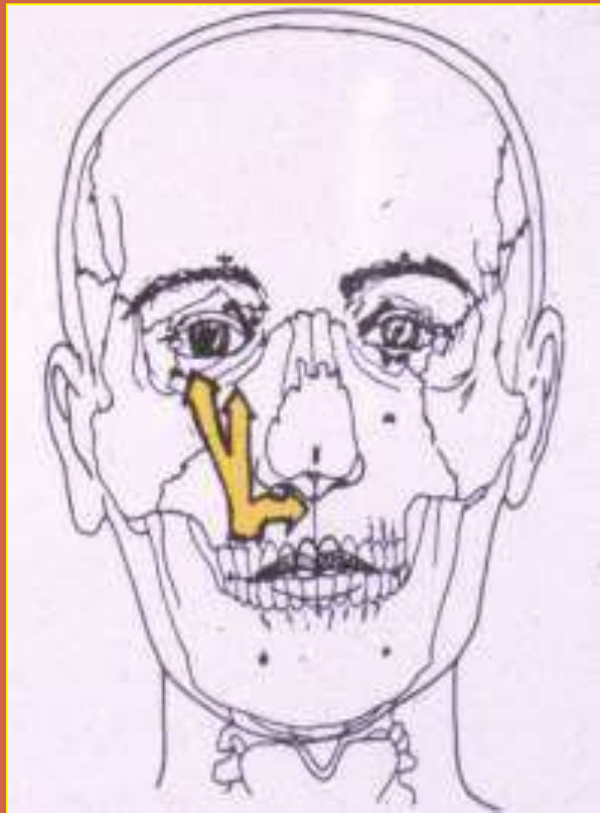


CANINE SPACE

- REGION BETWEEN ANTERIOR MAXILLA AND LEVATOR MUSCLES OVERLYING IT
- INFECTION FROM ROOT OF THE MAXILLARY CANINE, BUCCAL SPACE AND VESTIBULAR SPACE
- CHARACTERISED BY SWELLING LATERAL TO THE NOSE WHICH OBLITERATES THE NASOLABAL FOLD
- GAP BETWEEN TWO MUSCLES CAUSE SPREAD OF INFECTION TO CORNER OF THE EYE

INCISION ABOVE CANINE IN MUCOBUCCAL FOLD PARALLEL TP
VESTIBULAR DEPTH

ANGULAR VEIN CAN GIVE RISE TO CAVERNUS SINUS THROMBOSIS



BUCCAL SPACE

BOUNDARIES

ANTERIORLY- MODIOLUS

POSTERIORLY-

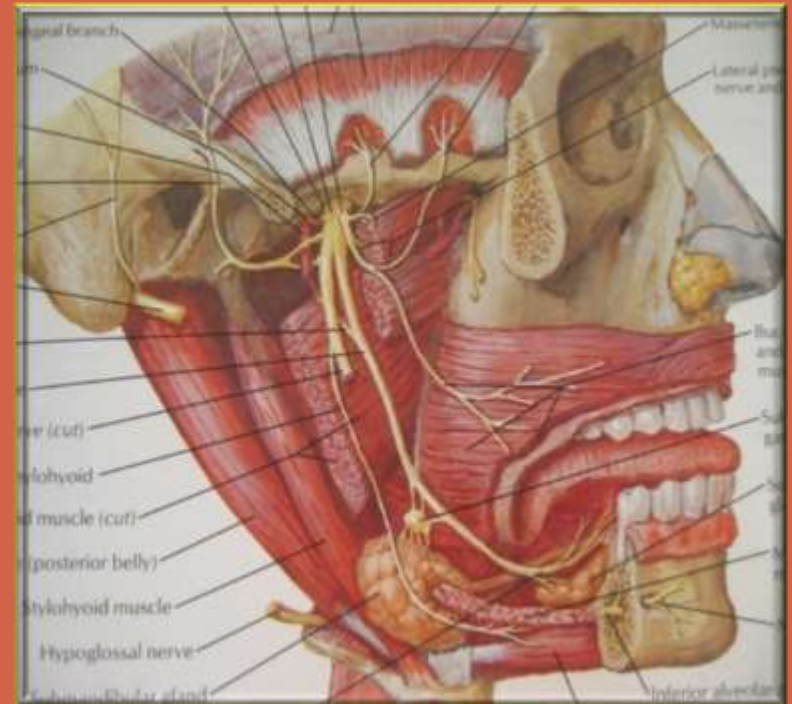
PTERYGOMANDIBULAR RAPHAE

SUPERIORLY- ZYGOMATIC BONE

INFERIORLY- MANDIBLE

LATERALLY- SKIN

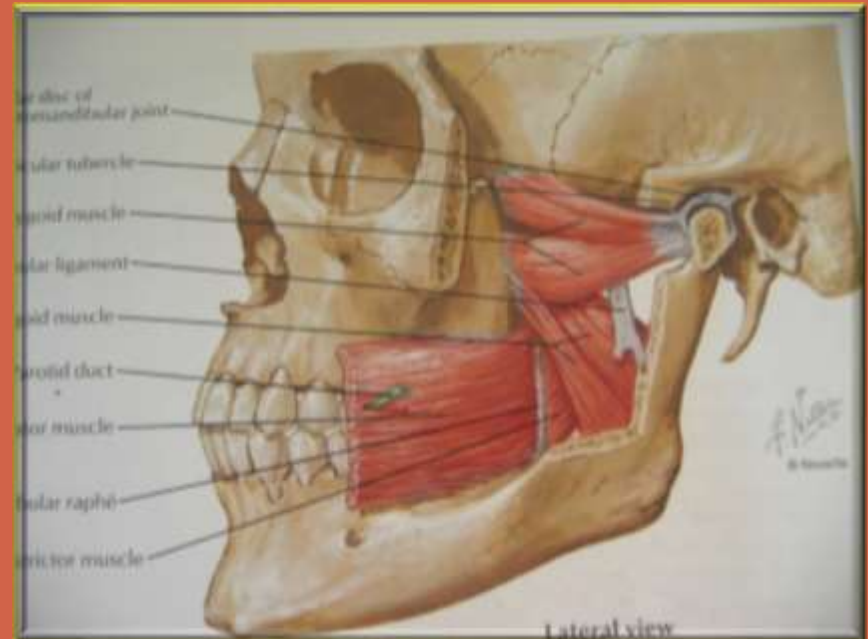
MEDIALY- BUCCINATOR



BUCCAL SPACE

COMMUNICATES WITH

- SUBMASSETERIC SPACE
- INFRATEMPORAL SPACE
- SUPERFICIAL TEMPORAL SPACE
- LATERAL PHARYNGEAL SPACE
- PTERYGOMANDIBULAR SPACE
- SUBMANDIBULAR SPACE

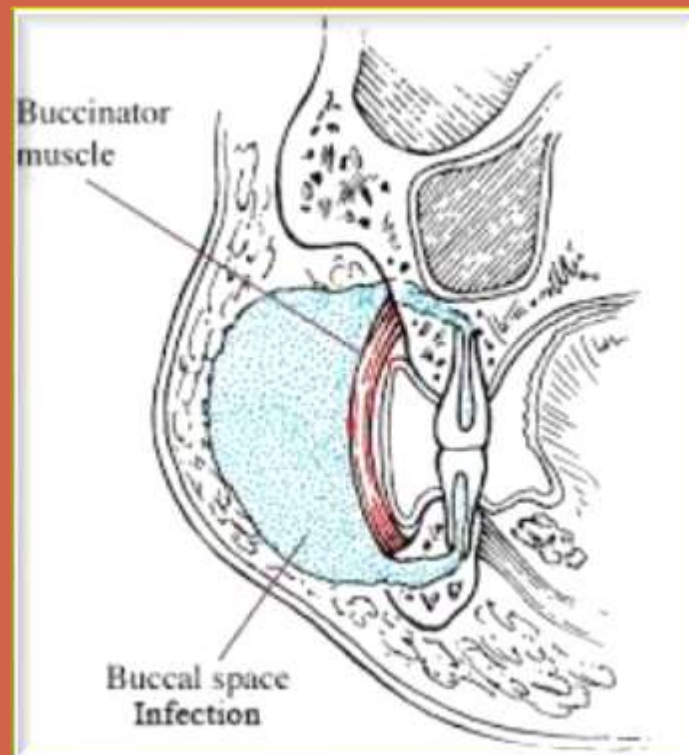


BUCCAL SPACE

- INFECTION FROM UPPER PREMOLARS, LOWER PREMOLARS AND LOWER MOLARS
- SWELLING DEEP TO SUBCUTANEOUS TISSUES
- APPROACHES

EXTRA-ORAL- SUBMANDIBULAR APPROACH

TRANS-ORAL- ORAL VESTIBULE



SUBMANDIBULAR SPACE

BOUNDARIES

ANTERIORLY- ANTERIOR BELLY OF DIGASTRIC

POSTERIORLY- POSTERIOR BELLY OF DIGASTRIC

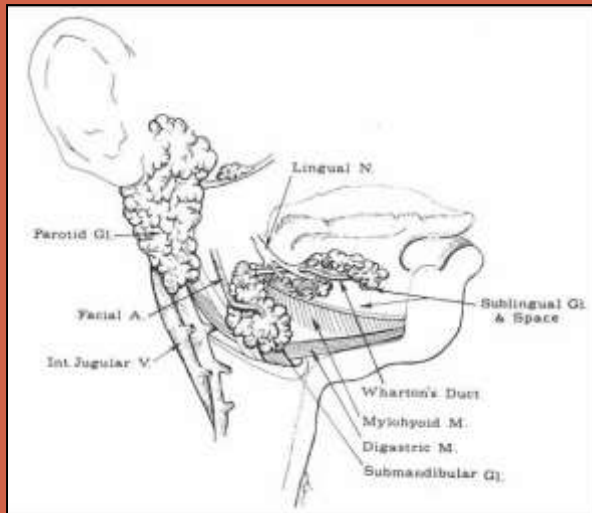
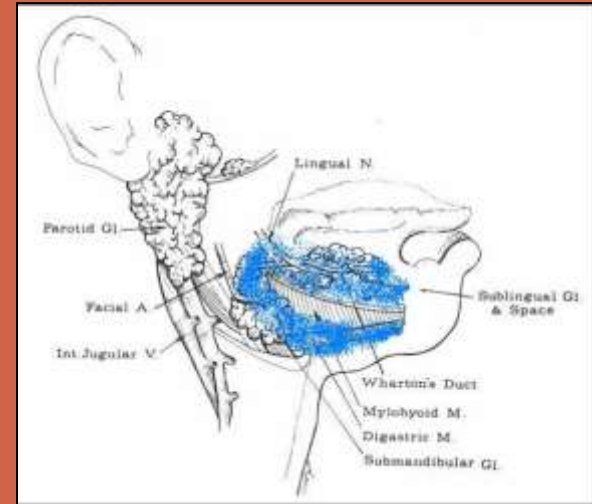
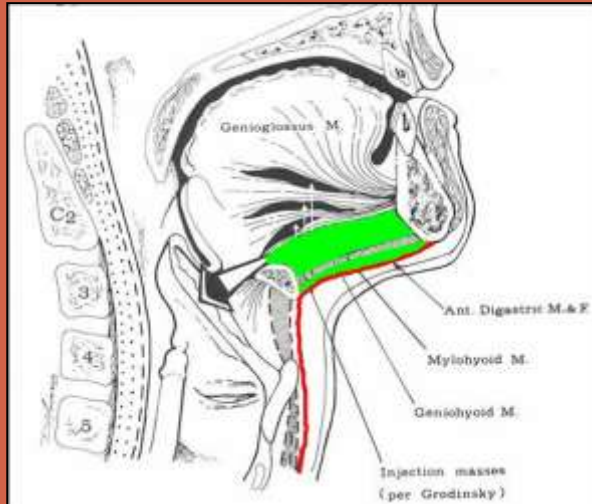
SUPERIORLY- LINGUAL AND INFERIOR MANDIBLE

INFERIOR TO ATTACHMENT OF MYOHYOID

LATERALLY- SKIN, SUPERFICIAL FASCIA, PLATYSMA

MEDIAALLY- MYLOHYOID, HYGLOSSUS AND STYLOGLOSSUS MUSCLE





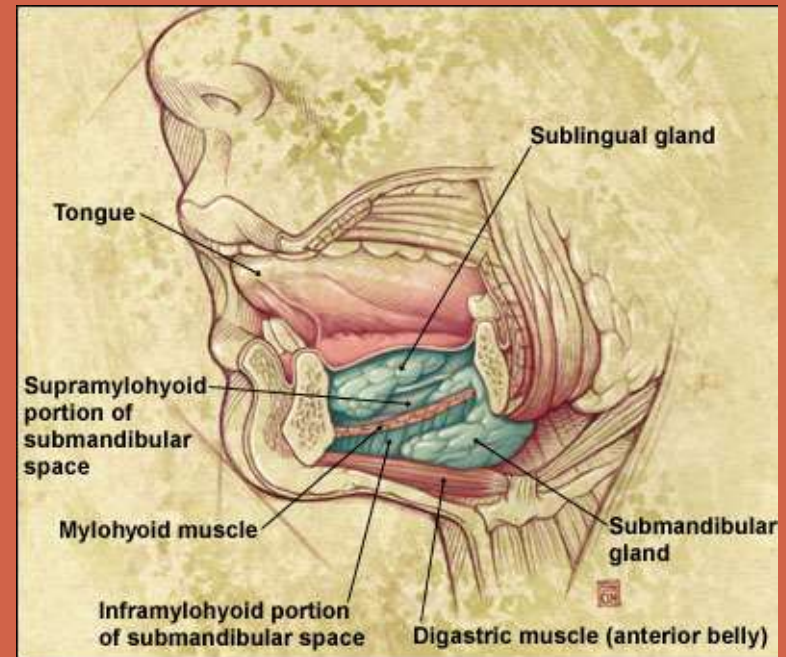


SUBMANDIBULAR SPACE

COMMUNICATES WITH
SUBMENTAL
SUBLINGUAL
LATERAL PHARYNGEAL SPACE

ETIOLOGY IS FROM LOWER MOLARS

SWELLING IN THE SUBMANDIBULAR
TRIANGLE.



SUBMANDIBULAR GLAND

- SWELLING IN THE AREA OF SUBMANDIBULAR TRIANGLE
- APPROACH:
EXTRAORAL-
SUBMANDIBULAR APPROACH





SUBLINGUAL SPACE

BOUNDARIES

SUPERIORLY-

MUCOSA OF THE FLOOR OF THE MOUTH

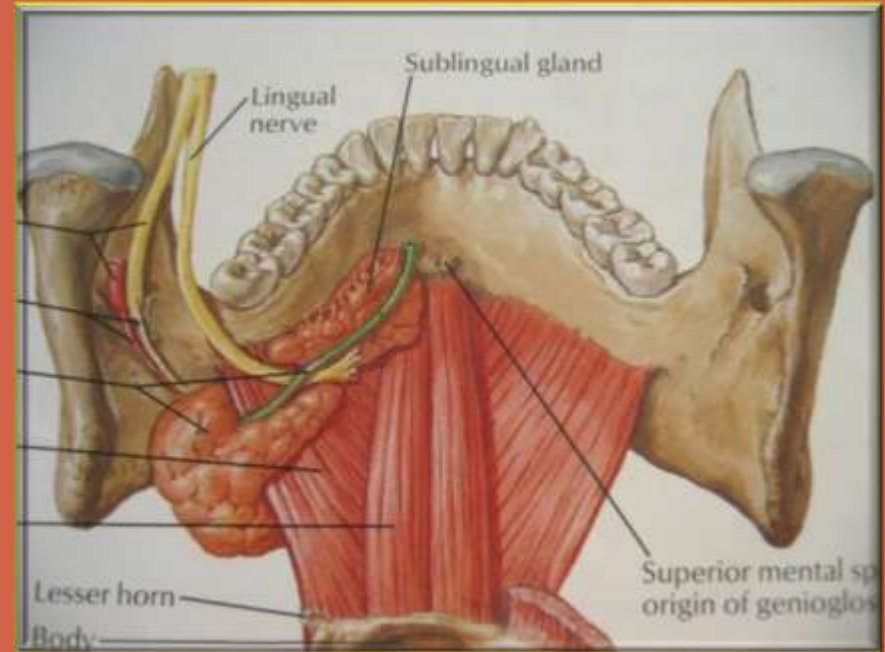
INFERIORLY- MYLOHYOID MUSCLE

LATERALLY AND ANTERIORLY-

MEDIAL SIDE OF MANDIBLE

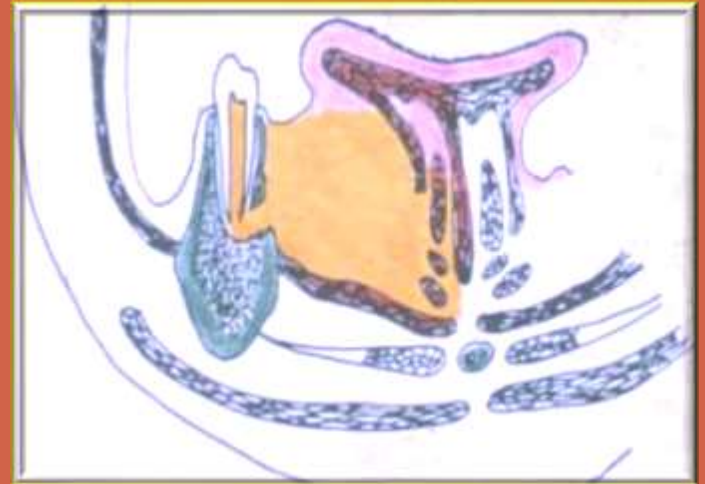
POSTERIORLY- POSTERIOR BORDER OF MYLOHYOID MUSCLE

MEDIAALLY- INTRINSIC MUSCLES OF THE TONGUE AND GENIOGLOSSUS



SUBLINGUAL SPACE

- COMMUNICATIONS WITH LATERAL PHARYNGEAL AND SUBMANDIBULAR SPACE
- INFECTIONS FROM LOWER MOLARS, PREMOLARS, SURGICAL TRAUMA
- CHARACTERISTIC FEATURE IS TONGUE IS DISPLACED SUPERIORLY RESULTING IN AIRWAY EMBARRASSMENT



SUBLINGUAL SPACE

INTRAORAL APPROACH

INCISION LATERAL TO AND PARALLEL
TO THE SUBMANDIBULAR DUCT



EXTRAORAL APPROACH ALSO DONE BY
SUBMANDIBULAR APPROACH



SUBMENTAL TRIANGLE

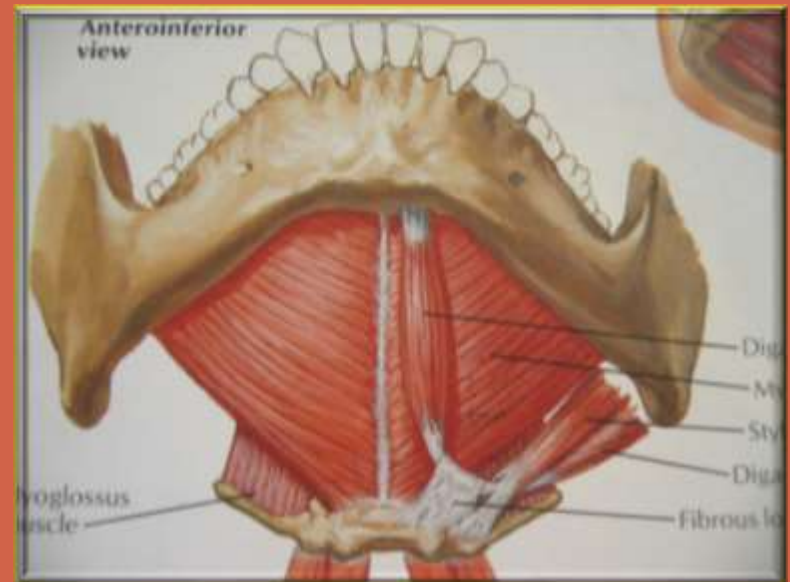
BOUNDARIES

SUPERIORLY- MYLOHYOID MUSCLE

INFERIORLY- SKIN , SUPERFICIAL
FASCIA, PLATYSMA MUSCLE

ANTERIORLY- INFERIOR BORDER OF
MANDIBLE AND MENTALIS MUSCLE

POSTERIORLY- HYOID BONE AND
LATERAL PHARYNGEAL SPACE



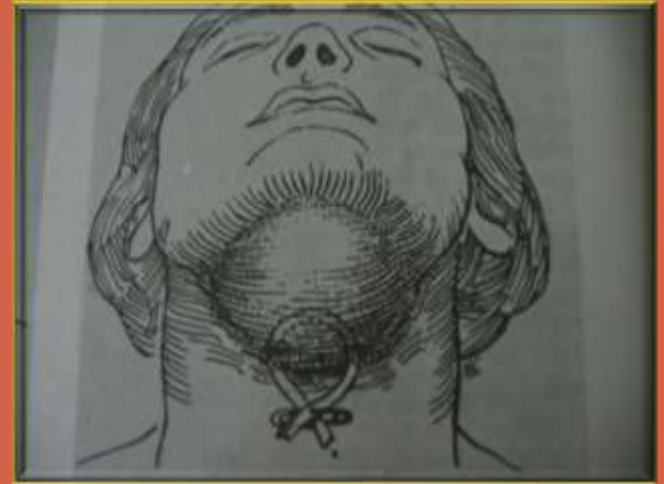
SUBMENTAL SPACE

INFECTIONS SPREADS FROM ANTERIOR
MANDIBULAR TEETH,
SUBMANDIBULAR SPACE ETC
CHARACTERISTIC FEATURE IS THE
SWELLING OF THE CHIN WITH IN
THE SUBMENTAL TRIANGLE



SUBMENTAL SPACE

INCISION IS MADE AT THE MIDLINE OF
THE NECK PARALLEL TO OR WITHIN
NECK CREASE JUST BELOW THE
INFERIOR EXTENT OF THE ABSCESS
BLUNT DISSECTION THROUGH SKIN
PLATYSMA, SUPERFICIAL FASCIA ETC
DRAIN TO BE PLACED



MASTICATOR SPACE

- COMPOSED OF 3 DISCRETE SPACES.

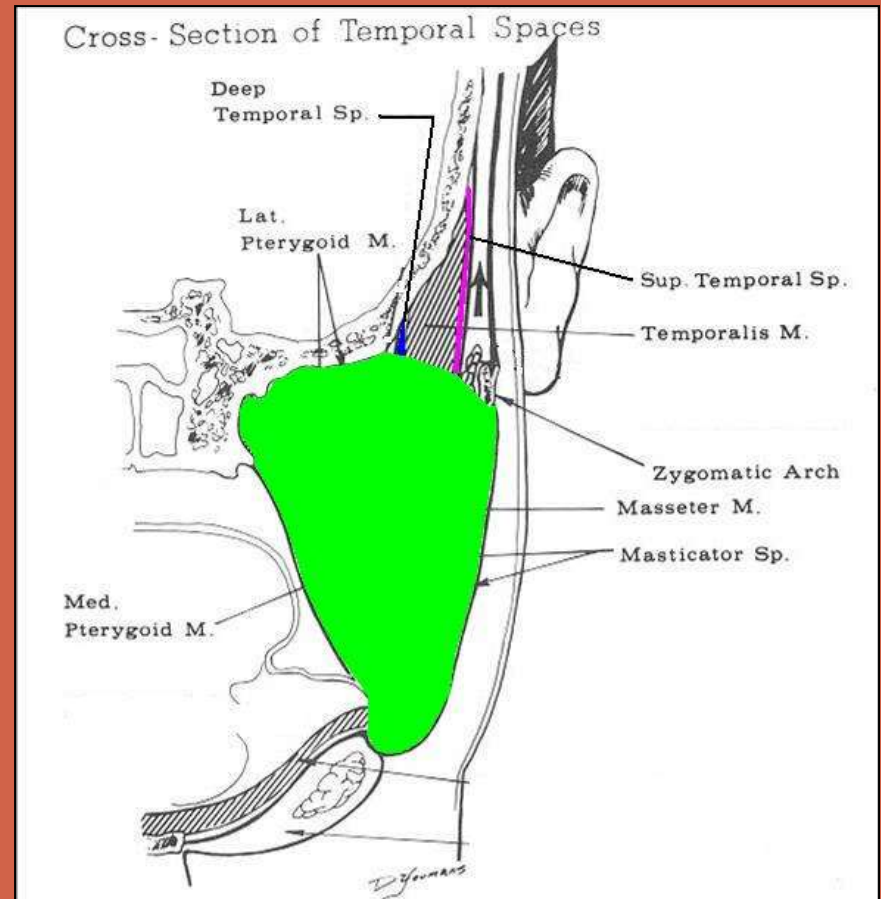
MASSETERIC SPACE

PTERYGOMANDIBULAR SPACE

TEMPORAL SPACE

- THE ANTERIOR LAYER OF DEEP CERVICAL FASCIA SPLITS AT THE INFERIOR BORDER OF THE MANDIBLE TO ENCLOSE THESE SPACES

- TRISMUS IS A CHARACTERISTIC FEATURE OF A MASTICATOR SPACE INFECTION



MASSETERIC SPACE

BOUNDARIES

LATERALLY- MASSETER MUSCLE

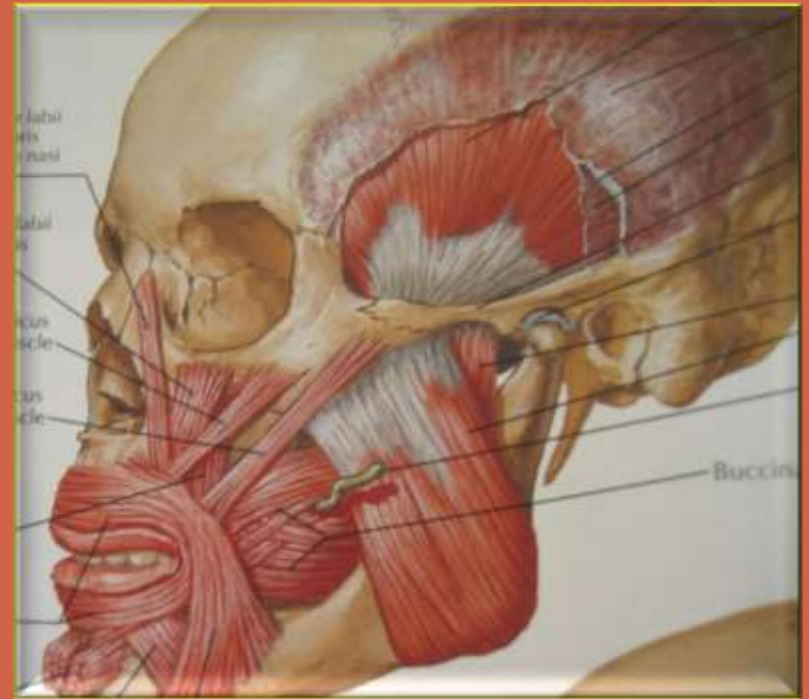
MEDIALLY- LATERAL SURFACE OF RAMUS OF MANDIBLE

SUPERIORLY ATTACHMENT OF FASCIA TO ZYGOMATIC ARCH

INFERIORLY PTERYGOMASSETERIC SLING

ANTERIORLY FACIAL EXTENSION OF FASCIA

POSTERIORLY RETROMANDIBULAR PORTION OF PAROTID GLAND



MASSETERIC SPACE

- COMMUNICATES WITH TEMPORAL SPACE AND PTERYGOMANDIBULAR SPACE
- INFLAMMATION OF MASTICATOR MUSCLE THEREFORE TRISMUS
- SWELLING MAINLY OVER ANGLE OF MANDIBLE
- DISTINGUISH FROM BUCCAL SPACE AND PAROTID SPACE SWELLING

MASSETERIC SPACE

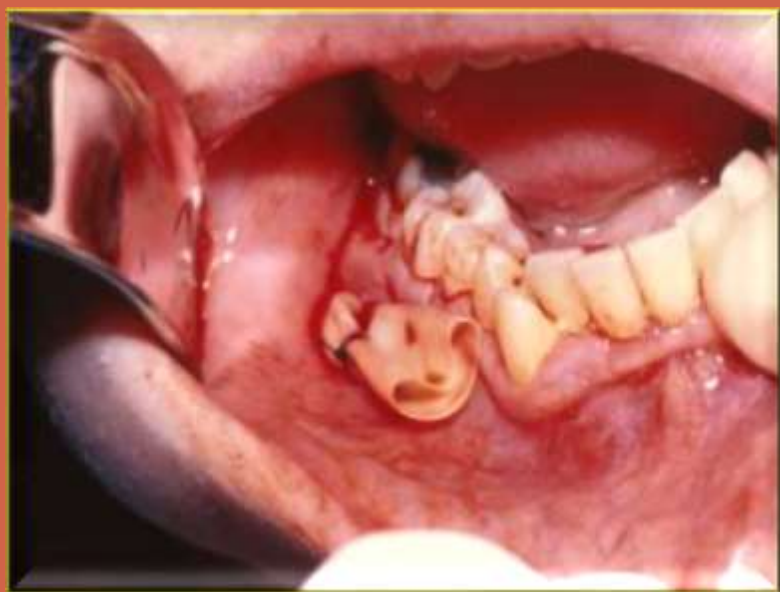
APPROACH

EXTRAORAL THROUGH SUBMANDIBULAR APPROACH AND
THROUGH ANGLE OF MANDIBLE

INTRAORALLY THROUGH INCISION PARALLEL TO

PTERYGOMANDIBULAR RAPHAE AND DEEP BLUNT DISSECTION

LATERAL TO RAMUS



PTERYGOMANDIBULAR SPACE

BOUNDARIES

LATERALLY MEDIAL WALL OF RAMUS OF
THE MANDIBLE

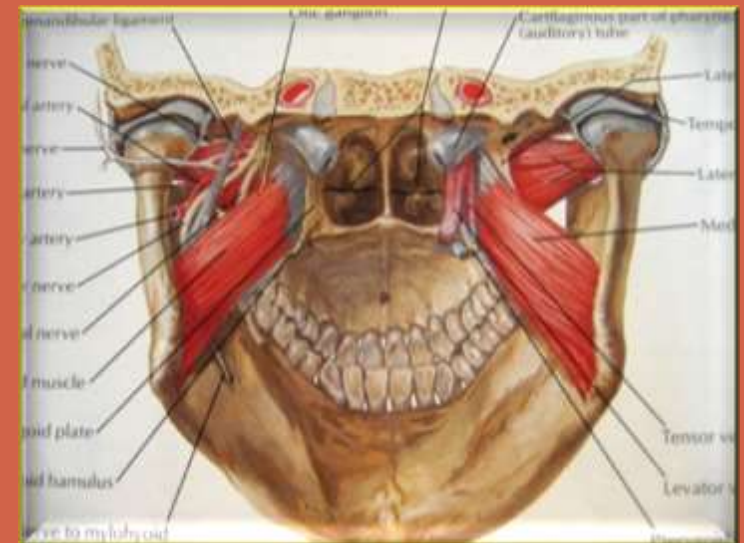
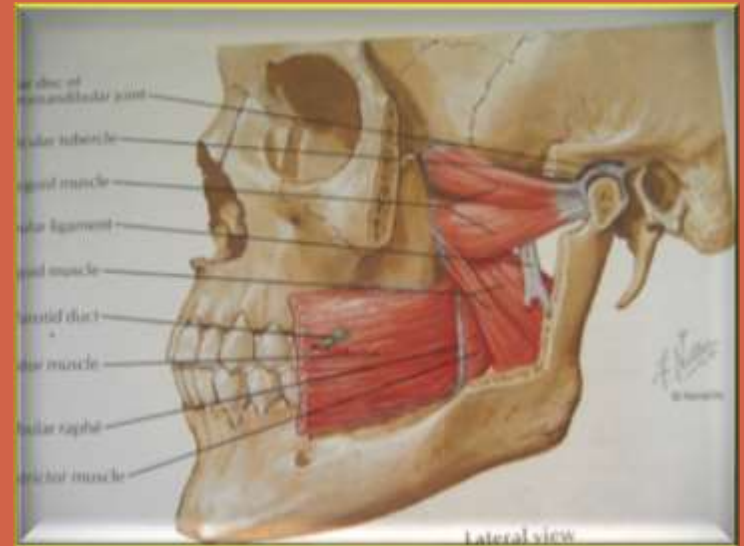
MEDIALY MEDIAL PTERYGOID MUSCLE

ANTERIORLY PTERYGOMANDIBULAR RAPHAE

POSTERIORLY CAPSULE OF PAROTID GLAND

INFERIORLY PTERYGOMASSETERIC SLING

SUPERIORLY LATERAL PTERYGOID MUSCLE



PTERYGOMANDIBULAR SPACE

- COMMUNICATES WITH THE INFRATEMPORAL SPACE AND LATERAL PHARYNGEAL SPACE
- INFECTIONS CAUSED BY NEEDLE TRACK INFECTIONS, MANDIBULAR THIRD MOLARS, PERICORONITIS ETC.
- INTRA-ORALLY SWELLING OF SOFT PALATE, TONSILLAR PILLAR AND DEVIATION OF UVULA

PTERYGOMANDIBULAR SPACE

DRAINAGE

EXTRAORALLY IS SUBMANDIBULAR

APPROACH AND GOING MEDIAL TO

RAMUS OF THE MANDIBLE

INTRAORALLY INCISION PARALLEL TO

RAPHAE AND GOING MEDIALY



TEMPORAL SPACE

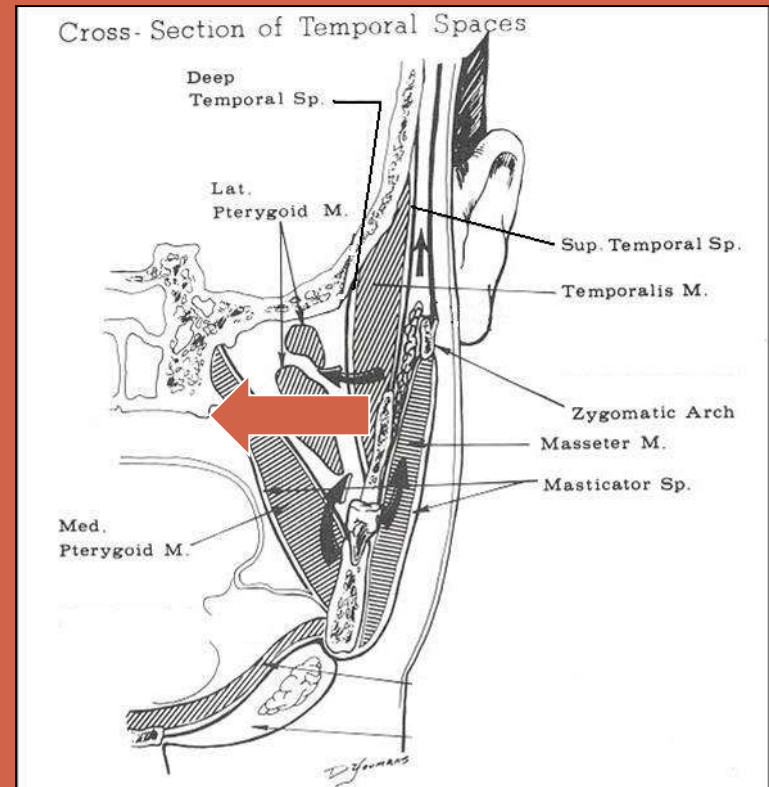
THREE SPACES

- THE SUPERFICIAL TEMPORAL
- THE DEEP TEMPORAL
- INFRA TEMPORAL SPACES



SUPERFICIAL TEMPORAL SPACE

- LIES BETWEEN TEMPORAL FASCIA AND TEMPORALIS MUSCLE
- ANTERIORLY POSTERIOR SURFACE OF LATERAL ORBITAL RIM
- POSTERIORLY FUSION OF FASCIA WITH PERICRANIUM
- SUPERIORLY FUSION OF FASCIA WITH SUPERFICIAL CREST OF TEMPORAL BONE
- INFERIORLY ZYGOMATIC ARCH AND AREOLAR TISSUE



SUPERFICIAL TEMPORAL SPACE

- COMMUNICATES WITH BUCCAL SPACE THROUGH BUCCAL PAD OF FAT AND MASSETERIC SPACE THROUGH AREOLAR TISSUE
- DUMBELL SHAPED SWELLING WHEN COMMUNICATING WITH BUCCAL SPACE
- PAIN AND TRISMUS



DEEP TEMPORAL SPACES

- PRESENT BETWEEN TEMPORALIS MUSCLE AND SQUAMOUS TEMPORAL BONE
- **INFERIORLY** SUPERIOR SURFACE OF LATERAL PTERYGOID MUSCLE
- **SUPERIORLY AND POSTERIORLY** ATTACHMENT OF TEMPORALIS TO BONE
- **ANTERIORLY** POSTERIOR WALL OF SINUS AND ORBIT AND PTERYGOMAXILLARY FISSURE
- PAIN AND TRISMUS



DRAINAGE OF TEMPORAL SPACES

THOUGH THEY ARE ANATOMICALLY DIVIDED INTO TWO SPACES THEY COMMUNICATE THROUGH INFRATEMPORAL SPACE.

APPROACHES:

EXTRAORAL THROUGH SUPRAZYGOMATIC APPROACH

INTRAORAL INCISION IN THE SUPERIOR ASPECT OF THE POSTERIOR MAXILLARY BUCCAL VESTIBULE



INFRATEMPORAL SPACES

MEDIALY BY LATERAL PTERYGOID PLATE AND LOWER PART OF LATERAL PTERYGOID MUSCLE

LATERALLY BY TEMPORAL TENDON AND CORONOID PROCESS

SUPERIORLY BY INFRA-TEMPORAL PART OF GREATER WING OF SPHENOID

INFERIORLY PTERYGO-MANDIBULAR RAPHAE

ANTERIORLY INFRA-TEMPORAL SURFACE OF MAXILLA AND POSTERIOR SURFACE OF ZYGOMATIC BONE

POSTERO-LATERALLY BY CONDYLE TEMPORALIS MUSCLE



INFRATEMPORAL SPACE

COMMUNICATES WITH

LATERAL PHARYNGEAL SPACE

DEEP TEMPORAL AND SUPERFICIAL TEMPORAL SPACES

PAROTID SPACE

PTERYGOMANDIBULAR SPACE

BUCCAL SPACE

INFRATEMPORAL SPACE

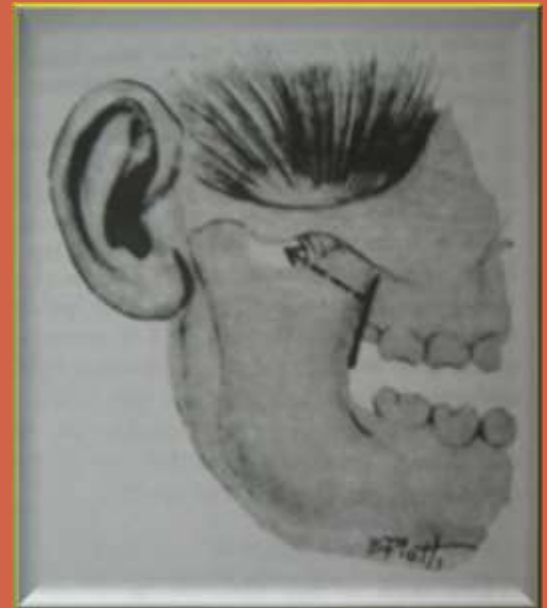
- ONE OF THE SOURCES OF INFECTION FOR CAVERNOUS SINUS THROMBOSIS
- CHARACTERISTIC FEATURE INCLUDE PAIN TRISMUS AND SPIKING FEVER
- ISOLATED INFECTIONS ARE RARE USUALLY DUE TO SECONDARY INFECTIONS

INFRATEMPORAL SPACE

THIS IS AT THE INTERSECTION OF DEEP TEMPORAL SPACE AND PTERYGOMANDIBULAR SPACE
THEREFORE CAN BE APPROACHED THROUGH THESE TWO SPACES

EXTRAORALLY SUBMANDIBULAR ROUTE AND DEEP TEMPORAL ROUTE

TRANSORAL APPROACH - INCISION IS GIVEN IN THE MAXILLARY VESTIBULE AND DISSECTION IS DIRECTED THROUGH THE BUCCINATOR MUSCLE AND CARRIED POSTERIORLY AROUND MAXILLARY TUBEROSITY TO ENTER THE SPACE.



LATERAL PHARYNGEAL SPACE

SUPRAHYOID OR PARAPHARYNGEAL SPACE

SUPERIOR- SKULL BASE

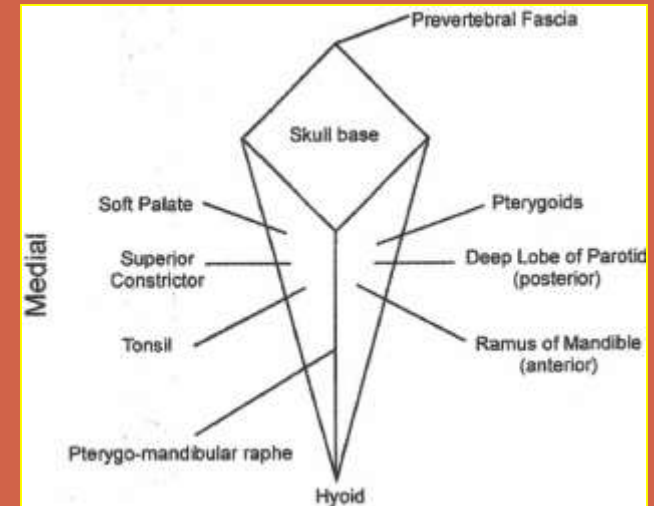
INFERIOR- HYOID

ANTERIOR- PTYERGOMANDIBULAR RAPHE

POSTERIOR- PREVERTEBRAL FASCIA

MEDIAL- BUCCOPHARYNGEAL FASCIA

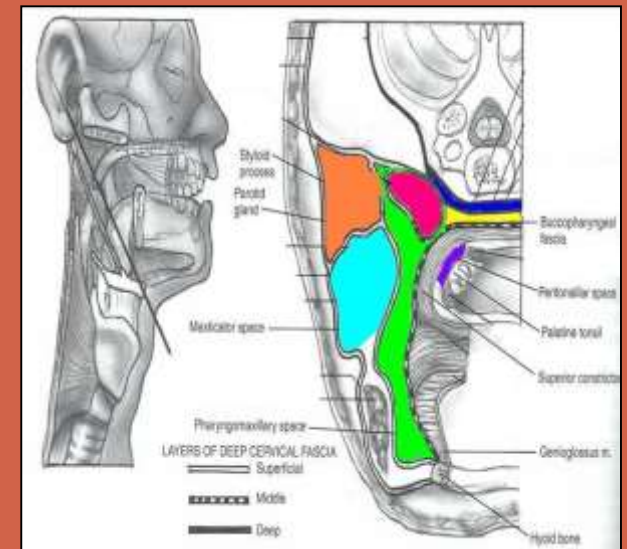
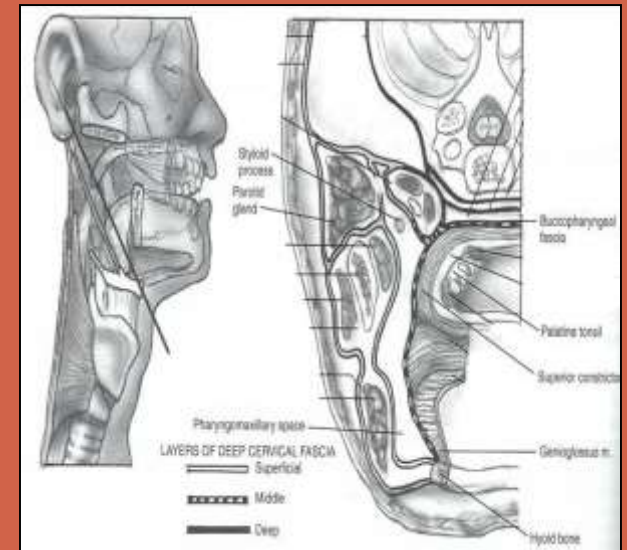
LATERAL- SUPERFICIAL LAYER OF DEEP FASCIA



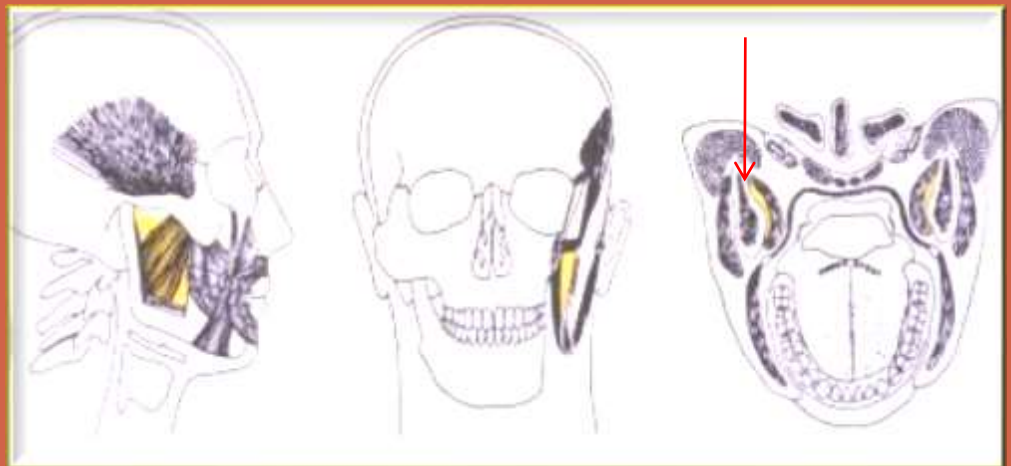
LATERAL PHARYNGEAL SPACE

COMMUNICATES WITH SEVERAL
DEEP NECK SPACES.

- PAROTID
- MASTICATOR
- PERITONSILLAR
- SUBMANDIBULAR
- RETROPHARYNGEAL

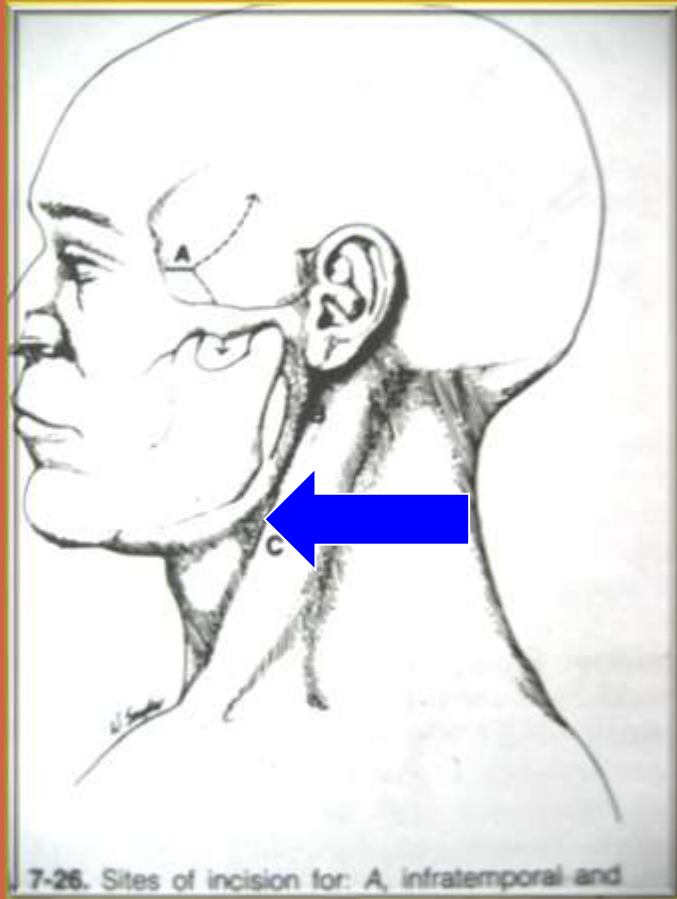


LATERAL PHARYNGEAL SPACE

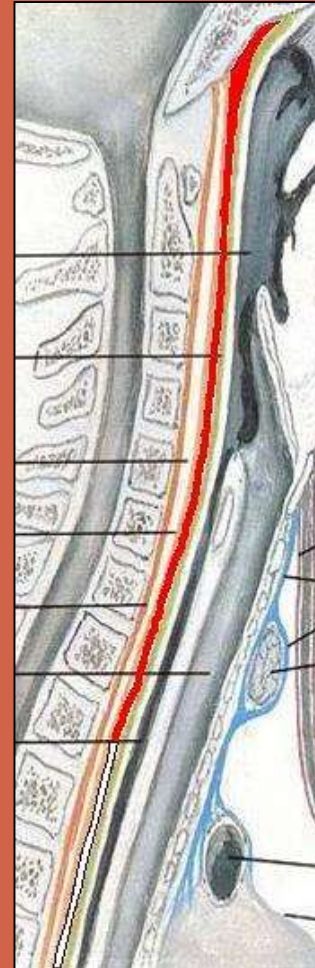
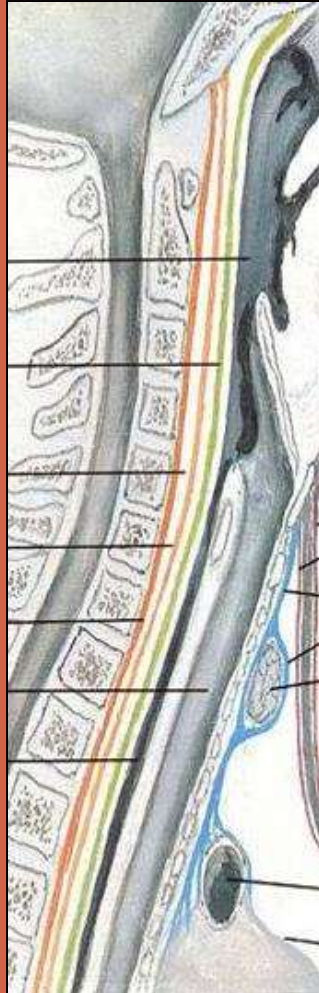
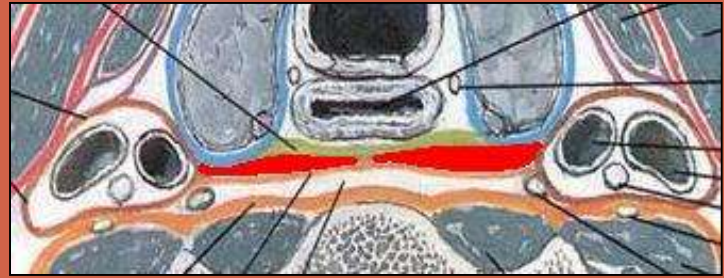


TREATMENT

- ABSOLUTE AIRWAY CONTROL
- ASPIRATION
- ANTERIOR COMPARTMENT DRAINED VIA TRANS ORAL APPROACH
- POSTERIOR ALSO INVOLVED EXTRA ORAL SUBMANDIBULAR APPROACH



7-26. Sites of incision for: A, infratemporal and

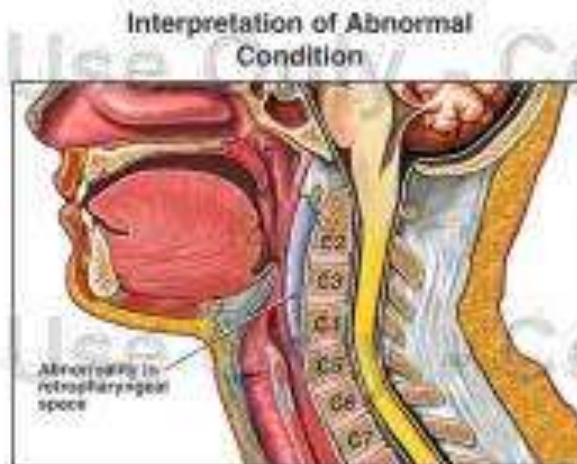
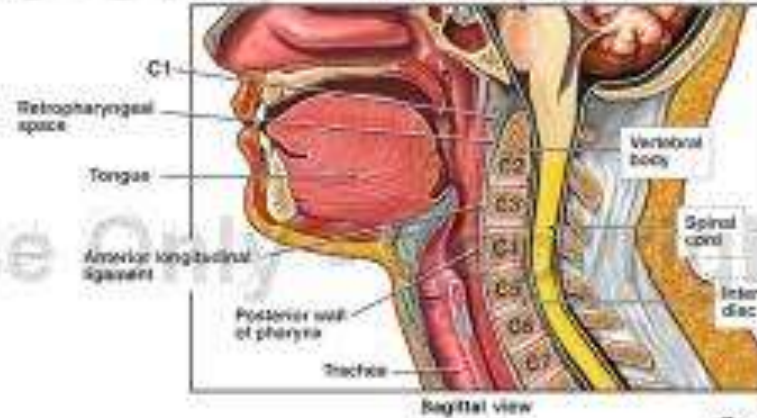
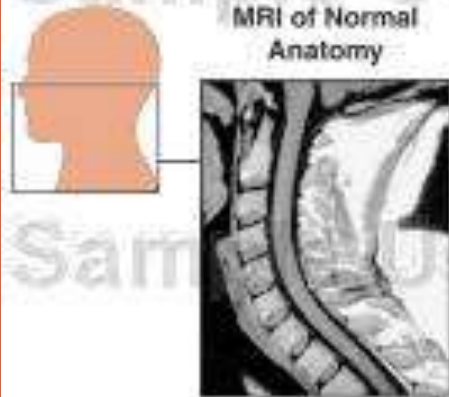


RETROPHARYNGEAL SPACE

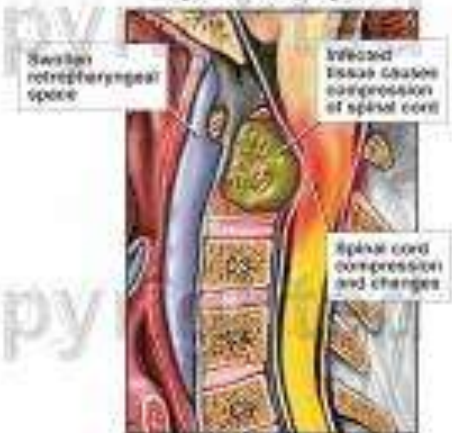
- ENTIRE LENGTH OF NECK.
- ANTERIOR BORDER - PHARYNX AND ESOPHAGUS
(BUCCOPHARYNGEAL FASCIA)
- POSTERIOR BORDER - ALAR LAYER OF DEEP FASCIA
- SUPERIOR BORDER - SKULL BASE
- INFERIOR BORDER – SUPERIOR MEDIASTINUM
 - COMBINES WITH BUCCO-PHARYNGEAL FASCIA AT LEVEL OF T1-T2
- MIDLINE RAPHE CONNECTS SUPERIOR CONSTRICTOR TO THE DEEP LAYER OF DEEP CERVICAL FASCIA.
- CONTAINS RETROPHARYNGEAL NODES.

Abnormality in the Retropharyngeal Space

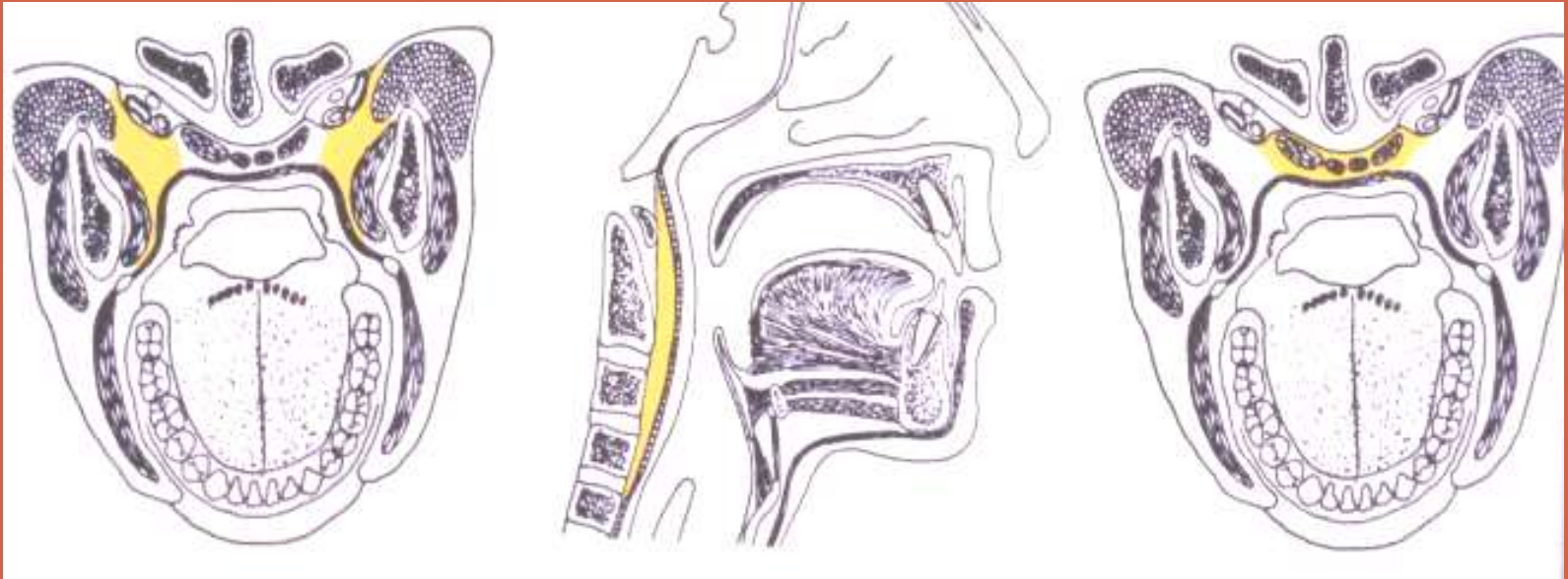
Normal Anatomy



Condition Based upon MRI and Operative Report



Retropharyngeal Space



CLINICAL FEATURES

- DYSPHAGIA
- DYSPNOEA
- BULGING OF POSTERIOR PHARYNGEAL WALL
- NECK STIFFNESS

TREATMENT

- EXTRAORAL THROUGH CAROTID TRIANGLE THROUGH LATERAL ASPECT OF THYROID CARTILAGE MEDIAL TO CAROTID SHEATH
- INTRAORAL THROUGH VERTICAL INCISION IN MUCOSA OF PHARYNGEAL WALL AND BLUNT DISSECTION THROUGH SUPERIOR PHARYNGEAL CONSTRICTOR AND INTO THE SPACE

DANGER SPACE

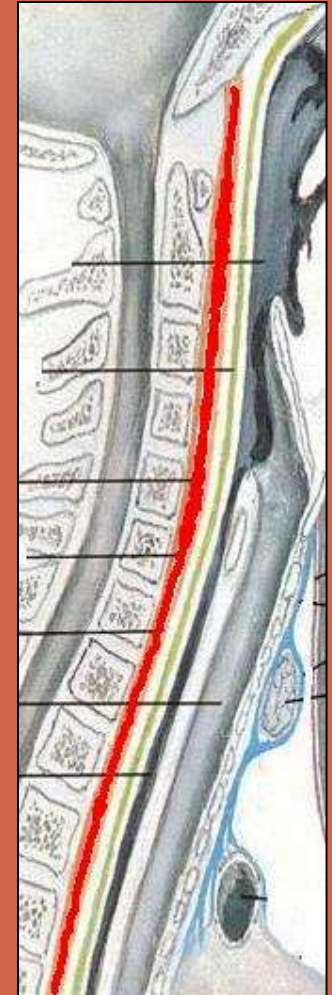
ENTIRE LENGTH OF NECK

ANTERIOR BORDER - ALAR
LAYER OF DEEP FASCIA

POSTERIOR BORDER -
PREVERTEBRAL LAYER

EXTENDS FROM SKULL BASE TO
DIAPHRAGM

CONTAINS LOOSE AREOLAR
TISSUE.



CLINICAL FEATURES

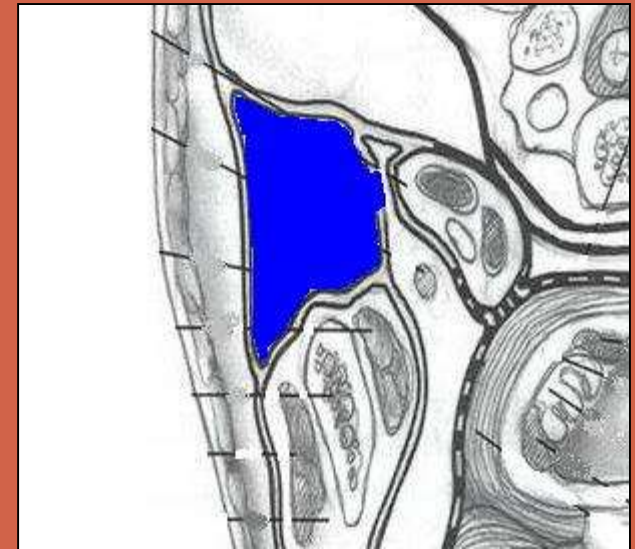
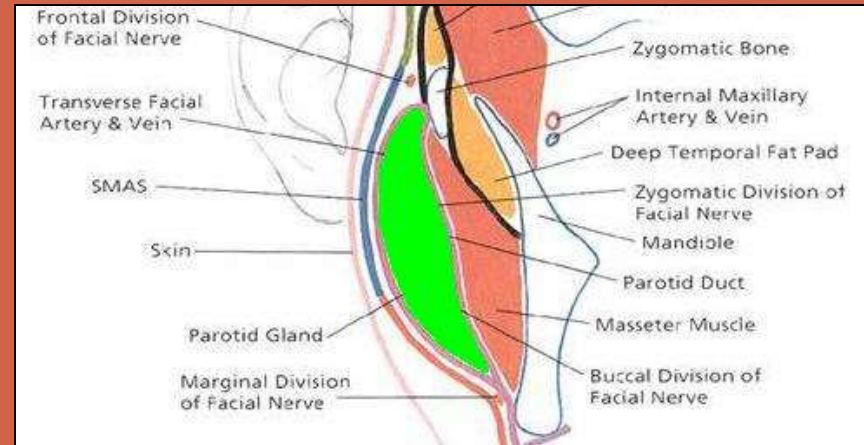
- DYSPNOEA
- CHEST PAIN
- HOT POTATO VOICE
- PLEURAL EFFUSION
- MEDIASTINAL ABSCESS FORMATION
- EMPYEMA
- PERICARDITIS

TREATMENT

- SAME AS RETROPHARYNGEAL SPACE
- ONCE IN THE SPACE ADVANCE DISSECTION THROUGH THE ALAR FASCIA

PAROTID SPACE

- SUPRAHYOID
- SUPERFICIAL LAYER OF DEEP FASCIA
 - DENSE SEPTA FROM CAPSULE INTO GLAND
 - DIRECT COMMUNICATION TO PARAPHARYNGEAL SPACE
- CONTAINS
 - EXTERNAL CAROTID ARTERY
 - POSTERIOR FACIAL VEIN
 - FACIAL NERVE
 - LYMPH NODES

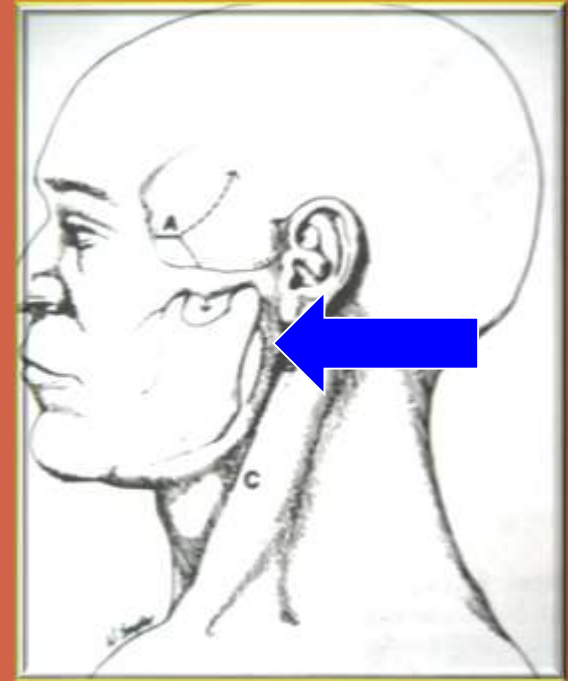


CLINICAL FEATURES

- SWELLING FROM ZYGOMATIC ARCH TO LOWER BORDER OF MANDIBLE
- POSTERIORLY EVERTS LOBULE OF THE EAR
- SEVERE PAIN IN THE EAR
- POSSIBLE ESCAPE OF PUS FROM THE DUCT WHEN THE GLAND IS MILKED

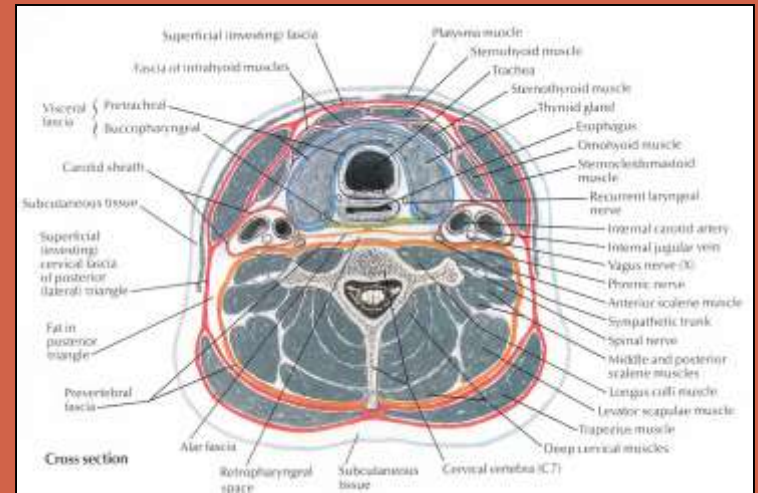
TREATMENT

- EXTRAORAL
 - RETROMANDIBULAR INCISION
 - ANGLE OF THE MANDIBLE



CAROTID SHEATH ABSCESS

- EXTENDS FROM JUGULAR FORAMEN AND CAROTID CANAL TO MEDIASTINUM
- TENDER SWELLING ON LATERAL ASPECT OF NECK
- COMPLICATIONS INCLUDE SPREAD TO CHEST AND SEPTIC VENOUS THROMBOSIS
- DRAINAGE IS FROM INCISION IN ANTERIOR LATERAL NECK AND EXPLORATION OF CAROTID SHEATH



PRINCIPLES OF TREATMENT

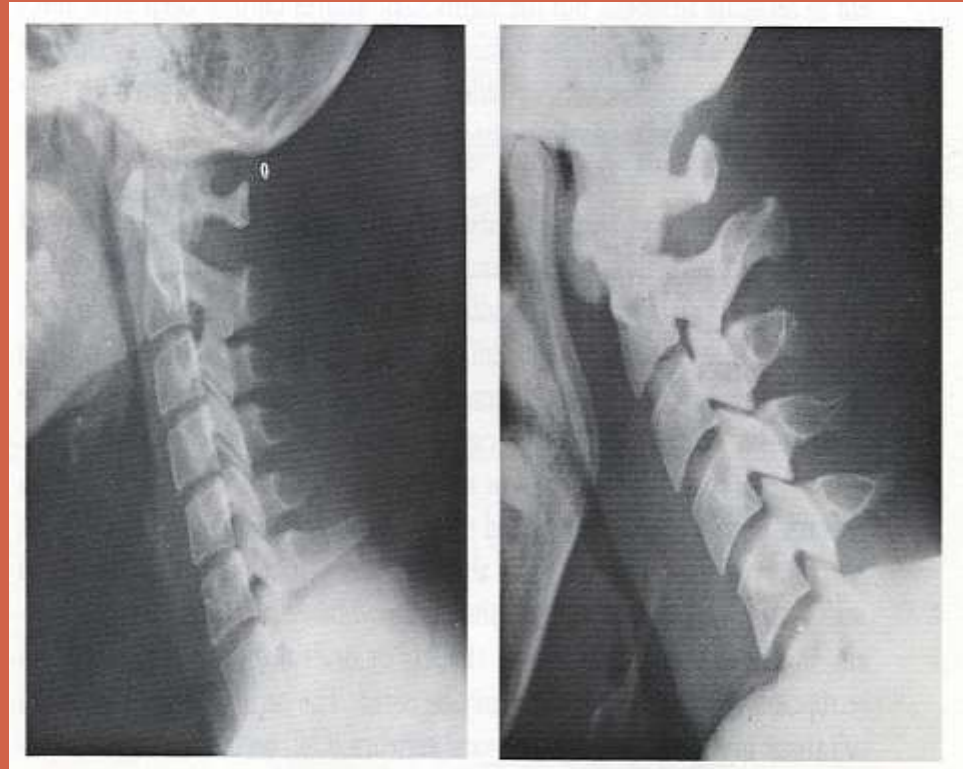
- DETERMINE THE SEVERITY OF THE INFECTION
- STATE OF THE PATIENTS HOST DEFENSE
- DECIDE ON SETTING OF CARE
- TREAT THE INFECTION SURGICALLY
- PROVIDE MEDICAL SUPPORT
- CHOOSING ANTIBIOTIC THERAPY
- ADMINISTERING APPROPRIATELY
- EVALUATION OF THE PATIENT

SEVERITY OF INFECTION

- ANATOMIC LOCATION
- SEVERITY SCORE
- HISTORY AND PHYSICAL EXAMINATION
- IMAGING

IMAGING

- PANORAMIC RADIOGRAPHS
- WATERS VIEW
,POSTEROANTERIOR VIEW
AND LATERAL NECK VIEW
- CT AND MRI
- FLUORINE 18
FLUOROMISOIDAZOLE



CT VS MRI

MRI

PROS

- SUPERIOR TO CT IN INITIAL ASSESSMENT
- PRECISE IDENTIFICATION OF SPACE INVOLVEMENT (MULTIPLANAR)
- BETTER DETECTION OF UNDERLYING LESION
- LESS DENTAL ARTIFACT
- BETTER FOR FLOOR OF MOUTH
- NO RADIATION
- NON IODINE CONTRAST

CONS

- COST
- PT COOPERATION
- SLOWER (19 TO 35 MINUTES)

CT WITH CONTRAST

PROS

- WIDELY AVAILABLE
- FASTER (5-15 MINUTES)
- ABSCESS VS CELLULITIS
- LESS EXPENSIVE

CONS

- CONTRAST
- RADIATION
- UNIPLANAR
- DENTAL ARTIFACTS

AIRWAY COMPROMISE

- CRICO-THYROIDOTOMY TRACHEOSTOMY
- BREATH SOUNDS
- ABNORMAL POSITIONS
- TESTS FOR DIFFICULT INTUBATION
 - MALLAMPATTI TEST
 - INTERINCISAL DISTANCE
 - THYROMENTAL DISTANCE
 - PULSEOXIMETER

HOST DEFENSE MECHANISM

- MEDICAL CONDITIONS
- USE OF STEROIDS
- IMMUNOCOMPROMISED STATE
- SYSTEMIC RESERVE

SETTING OF CARE

- INDICATIONS FOR HOSPITAL ADMISSION
 - TEMPERATURE
 - DEHYDRATION
 - THREAT TO AIRWAY
 - INFECTION IN MODERATE OR HIGH SEVERITY ANATOMIC SPACES
 - NEED FOR GENERAL ANAESTHESIA
 - NEED FOR IN PATIENT CONTROL OF SYSTEMIC DISEASE

SURGICAL TREATMENT

- AIRWAY SECURITY
- INCISION AND DRAINAGE

Principles of incision and drainage

- Use the shortest and most direct, dependent route
- Place incision in healthy skin
- Use blunt dissection
- Use latex silicone or rubber catheters
- Clean drains in sterile fashion daily

Culture and sensitivity

- Proper technique
- Aseptic conditions

Medical support

- Fever
- Fluid loss
- Nutrition

Antibiotic therapy

- Indications
 - Immunocompromised
 - Trismus
 - Elevated temperature
 - Diabetics
 - Renal dialysis

Micro organisms

- Mixed aerobic and anaerobic flora
- Frequently isolated organisms are
 - Aerobic streptococci
 - Anaerobic streptococci
 - Bacteroides
 - Fusobacterium
 - Eikenella
 - Staph aureus ,staph epidermidis less frequently

Antibiotics

- Out patient
 - Pencillin
 - Clindamycin
 - Cephalexin
- Inpatient
 - Clindamycin
 - Ampicillin+metranidazole
 - Ampicillin+sulbactum
- Newer antibiotic
 - Moxifloxacin
 - Macrolides(azithromycin)

Duration of administration

- Concentration dependent
- Time dependent

Evaluation of the patient

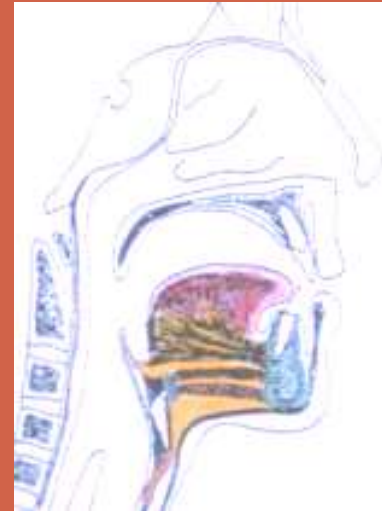
- Post operatively follow up
- Removal of drains
- Treatment decisions

Ludwigs angina

- Involves submandibular, sublingual and submental spaces bilaterally.
- Characteristically brawny hard swelling
- Floor of the mouth elevated
- Difficulty with respiration
- Edema of the glottis



Ludwig's Angina



Treatment

- Early airway establishment
- Bilateral drainage of the spaces



Cavernous sinus thrombosis

- Caused extension of septic thrombi by direct extension of venous system or by infected emboli
- Pain in the eye
- Diplopia, proptosis, ptosis
- Picket fence fever
- Fever, chills, rapid fluctuating pressure
- Advanced toxemia, meningitis



Treatment

- Early high dose of antibiotics
- Heparinization

Necrotizing fasciitis

- Aggressive superficial bacterial infection
- Predisposing factors diabetes and alcohol
- Facultative gram positive hemolytic streptococcus or mixed
- Tissue separation by finger dissection
- Antibiotics and irrigation with dilute hydrogen peroxide and betadine solution

Mediastinitis

Boundaries

Causes

Radiograph & CT

Drainage through cervicomedial route

And trans thoracic approach

Bibliography

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