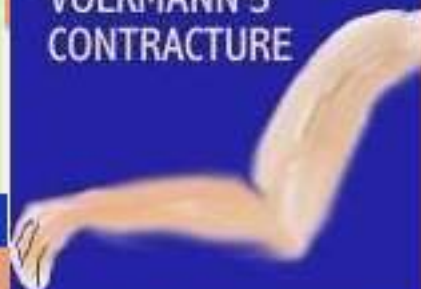


CHAPTER 19

1. CEREBRAL EDEMA
2. ARTHRITIS, OSTEOARTHRITIS, RHEUMATOID ARTHRITIS
3. FIBROMYALGIA
4. ELBOW FRACTURE
5. VOLKMANN'S CONTRACTURE
6. BURNS (FIRST, SECOND, THIRD AND FOURTH DEGREE)
7. RULE OF NINES CHART
8. SKIN GRAFTING



VOLKMANN'S CONTRACTURE



CEREBRAL EDEMA



TIM AGREED TO GO MOUNTAIN BIKING WITH HIS FRIEND. THIS IS HIS FIRST TIME. HE HAD NO IDEA THAT BIKING AT HIGH ALTITUDE COULD RESULT IN FEELING THIS BAD. HE IS BEGINNING TO HAVE AN UNBEARABLE HEADACHE, LIGHT-HEADEDNESS, NAUSEA AND FATIGUE.

CEREBRAL EDEMA IS CAUSED BY SWELLING ON THE BRAIN. FLUID ACCUMULATES IN THE BRAIN AND ICP (INTRACRANIAL PRESSURE) RISES. SYMPTOMS SUCH AS: SEVERE HEADACHE NAUSEA, VOMITING, SHORTNESS OF BREATH AND FATIGUE MAY RESULT. SEIZURE ACTIVITY MAY ALSO OCCUR.

FLUID IN THE BRAIN

TREATMENT OF THE PATIENT WITH CEREBRAL EDEMA MAY REQUIRE ICU CARE. TO LEARN MORE, ENJOY READING: MENINGITIS AND ICP MONITORING (WWW.DEARNURSES.COM).

- CAUSES OF CEREBRAL EDEMA INCLUDE, BUT ARE NOT CONFINED TO:
- HIGH ALTITUDE
 - BRAIN INJURIES SUCH AS HEMATOMA, SUBARACHNOID HEMORRHAGE
 - STROKE
 - BRAIN TUMOR
 - CARDIAC ARREST





HIGH
ALTITUDE

THE MANAGEMENT OF A PERSON WITH CEREBRAL EDEMA (IN A HOSPITAL SETTING) MAY REQUIRE THE USE OF DRUGS SUCH AS MANNITOL (TO REDUCE BRAIN SWELLING), PAIN MEDICATIONS, SEDATION, BARBITURATES AND VENTILATORY SUPPORT.

THERE ARE PEOPLE WHO ARE UNABLE TO TOLERATE HIGH ALTITUDE AND MAY EXHIBIT SYMPTOMS LIKE THE ONES DESCRIBED.

SEIZURES MAY RESULT FROM CEREBRAL EDEMA. TO LEARN MORE, READ: SIMPLIFYING SEIZURES WWW.DEARNURSES.NET





ARTHRITIS

INFLAMMATION OF THE JOINTS

I HATE THIS MORNING STIFFNESS.

MORNING STIFFNESS IS THE COMMON THREAD OF RHEUMATHOID ARTHRITIS



MARY HAS RA (RHEUMATHOID ARTHRITIS). EVERY MORNING, SHE HAS JOINT STIFFNESS AND DIFFICULTY GETTING OUT OF BED.

ARTHRITIS IS IDENTIFIED AS INFLAMMATION OF THE JOINTS AND A CHRONIC CONDITION. THERE ARE DIFFERENT TYPES OF THIS DEBILITATING CONDITION. THE COMMONEST FORMS ARE:

- RHEUMATHOID ARTHRITIS
- OSTEOARTHRITIS

FIBROMYALGIA AND GOUT ARE CONSIDERED TO BE ASSOCIATED WITH ARTHRITIS.

SIGNS AND SYMPTOMS OF RHEUMATHOID ARTHRITIS INCLUDE:

- PAINFUL AND SWOLLEN JOINTS
- MORNING STIFFNESS (THE JOINTS ARE VERY STIFF IN THE MORNING AND TAKE A LONG TIME TO LOOSEN UP.
- FATIGUE

DIAGNOSTIC TESTS

BLOOD TESTS LIKE THE CITRULLINE ANTIBODY, ANA (ANTINUCLEAR ANTIBODY), (ESR) ERYTHROCYTE SEDIMENTATION RATE ARE DONE TO CONFIRM THE DIAGNOSIS.

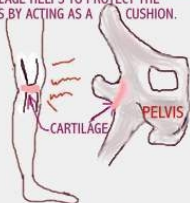


MARY HAS OSTEOARTHRITIS. SHE IS HAVING DIFFICULTY WALKING. HER KNEE JOINTS FEEL STIFF AND PAINFUL.

OSTEOARTHRITIS - A DEGENERATIVE CONDITION THAT AFFECTS THE JOINTS AT THE SPINE, HIPS, HANDS AND KNEES. IT IS CONSIDERED TO BE THE COMMONEST FORM OF ARTHRITIS AND MAY RESULT IN DISABILITY. THERE ARE SURGICAL PROCEDURES THAT MAY HELP TO IMPROVE MOBILIZATION OF THE JOINTS.

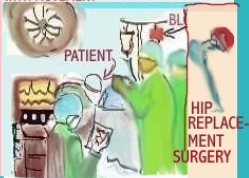
OSTEOARTHRITIS

CARTILAGE HELPS TO PROTECT THE JOINTS BY ACTING AS A CUSHION.



SYMPTOMS INCLUDE:

- STIFF AND PAINFUL JOINTS
- SWELLING, A GRATING FEELING AT THE JOINTS WHEN MOVEMENT OCCURS
- JOINT STIFFNESS AND DIFFICULTY WITH MOVEMENT



RHEUMATOID ARTHRITIS



AN EXERCISE REGIMEN MAY BE ORDERED BY THE DOCTOR, TO HELP LOOSEN THE JOINTS.

THE TREATMENT OF RHEUMATOID ARTHRITIS IS DIRECTED AT RELIEVING THE PAIN AND SWELLING WITH MEDICATIONS SUCH AS:

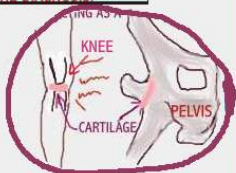
- STEROIDS
- ANTI- INFLAMMATORY DRUGS LIKE NAPROXEN AND IBUPROFEN
- DMARDs (DISEASE-MODIFYING ANTI-RHEUMATIC DRUGS) LIKE PLAQUENIL ARE USED TO SUPPRESS THE IMMUNE SYSTEM.

AN EXERCISE REGIMEN MAY BE ORDERED BY THE DOCTOR TO HELP LOOSEN THE JOINT STIFFNESS. PATIENTS MAY ALSO NEED ADEQUATE REST.

OSTEO-ARTHRITIS

BLOOD TESTS ARE ALSO DONE TO CONFIRM DIAGNOSIS.

X-RAY OF THE AFFECTED JOINT WILL CONFIRM THE DIAGNOSIS.



TREATMENT OF OSTEOARTHRITIS IS DIRECTED AT RELIEVING THE DISCOMFORT WITH DRUGS LIKE:

- NSAIDs (nonsteroidal anti-inflammatory drugs) NAPROXEN
- SURGICAL REPLACEMENT OF THE AFFECTED JOINT
- PAIN MEDICATIONS
- REST AND EXERCISE

DOCTOR, I FEEL AWFUL. MY WHOLE BODY HURTS. I FEEL SO TIRED, EVEN THOUGH I SLEEP AT NIGHT.

I WILL EXAMINE YOU RUN SOME TESTS.



FIBROMYALGIA

Q- WHAT IS FIBROMYALGIA?

A- FIBROMYALGIA IS CHARACTERIZED BY PAIN IN THE FORM OF A DULL ACHЕ THROUGHOUT THE ENTIRE BODY. TENDERNESS AT THE JOINTS, WHEN PRESSURE IS APPLIED, MAY ALSO OCCUR. FATIGUE AFTER A NIGHT'S REST IS COMMON.

DIAGNOSTIC TESTS: -

- THYROID STUDIES
 - CBC (COMPLETE BLOOD COUNT)
 - ESR (ERYTHROCYTE SEDIMENTATION RATE)
- ARE SOME OF THE DIAGNOSTIC TESTS THAT ARE LIKELY TO BE DONE.

THERE ARE SOME PRE-EXISTING CONDITIONS IN PATIENTS WITH FIBROMYALGIA. THESE INCLUDE (BUT ARE NOT CONFINED TO) :

- DEPRESSION
- ARTHRITIS
- LUPUS
- POST-TRAUMATIC DISORDERS

PHYSICAL THERAPY AND AN EXERCISE REGIMEN ARE ALL PART OF THE TREATMENT PLAN.

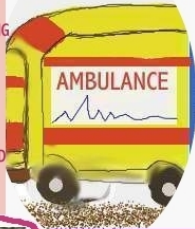


TREATMENT OF FIBROMYALGIA: MEDICATIONS LIKE CYMBALTA, LYRICA AND NSAIDs ARE USED TO HELP WITH THE PAIN AND ANXIETY ASSOCIATED WITH THIS CONDITION. COUNSELING AND AN EXERCISE REGIMEN MAY ALSO BECOME PART OF THE TREATMENT COURSE.

ELBOW FRACTURE

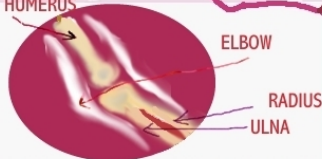


SARA SLIPPED AND FELL WHILE PLAYING TENNIS. SHE WAS TRANSPORTED TO THE ER FOR FURTHER EVALUATION. SHE WILL FIND OUT SHE HAS AN ELBOW FRACTURE.



ELBOW FRACTURES ARE COMMON IN CHILDREN. JUMPING AROUND AND SPORTS ARE SOME OF THE WAYS IN WHICH FRACTURES MAY OCCUR.

HUMERUS



THE ELBOW IS A JOINT. THERE ARE THREE BONES THAT MAKE UP THE ELBOW : HUMERUS, RADIUS AND ULNA.

THE ELBOW HAS A HINGE JOINT, SIMILAR TO THE ONE THAT IS FOUND ON A DOOR WHEN IT OPENS AND CLOSES.



A FALL OR DIRECT TRAUMA MAY RESULT IN ELBOW FRACTURE. SUPRACONDYLAR AND INTERCONDYLAR ARE SOME TYPES OF ELBOW FRACTURES.

THE DOCTOR EXAMINES SARA'S ELBOW.



SARA HAS AN ELBOW (OLECRANON) FRACTURE.

SYMPTOMS INCLUDE:

- PAIN, SWELLING AND TENDERNESS AT THE ELBOW JOINT
- NUMBNESS OF THE FINGERS

HELPFUL HINT: CHECK FINGERS FOR MOVEMENT AND GOOD CIRCULATION



ICE PACKS

SLING

ICE PACKS AND A SLING ARE ORDERED IN THE ER. IF SURGERY IS NOT NECESSARY, A SPLINT OR CAST MAY BE ORDERED BY THE MD.

PHYSICAL THERAPY MAY BE NEEDED LATER ON.

X-RAY OF ELBOW

ORDERED BY THE DOCTOR

VOLKMANN'S CONTRACTURE



SURGERY TO REPAIR THE ELBOW FRACTURE MAY BE NEEDED.

WIRES, PINS OR SCREWS MAY BE USED TO FIX THE FRACTURE.

THE POSSIBILITY OF INFECTION OR NERVE INJURY, MUST NOT BE RULED OUT.

COMPLICATIONS OF AN ELBOW FRACTURE INCLUDE :

- COMPARTMENT SYNDROME (SWELLING WITHIN A CONFINED SPACE, AFFECTING BLOOD FLOW AND CIRCULATION.

- VOLKMANN'S CONTRACTURE

- INJURY TO THE ELBOW MAY LEAD TO A DECREASE IN BLOOD SUPPLY (ISCHEMIA) TO THE NERVES AND MUSCLES. ULTIMATELY, CONTRACTURE OF THE WRIST, HAND AND FINGERS MAY RESULT.



SURGICAL INTERVENTION



SAM COOKS IN A RESTAURANT. HE WAS NOT PREPARED FOR HIS SLEEVE CATCHING ON FIRE. AS A RESULT, HE SUFFERED SECOND AND THIRD DEGREE BURNS OF HIS LEFT ARM. HE WAS TRANSPORTED TO A NEARBY HOSPITAL FOR FURTHER EVALUATION AND TREATMENT.

BURNS MAY BE CAUSED BY ELECTRICITY, HEAT, COLD, CHEMICALS AND MORE. SOME OF THE COMPLICATIONS OF BURNS INCLUDE: INFECTION AND POSSIBLY SEPSIS, DEHYDRATION, CONTRACTURES AND LOSS OF ELECTROLYTES. FLUID REPLACEMENT AND FREQUENT DRESSING CHANGES OF THE AFFECTED AREA MAY BE NECESSARY.

FIRST DEGREE BURN INVOLVES THE EPIDERMIS




THE OUTER-MOST LAYER OF THE SKIN

SECOND DEGREE BURNS INVOLVE NOT ONLY THE OUTER LAYER, BUT ALSO THE LAYER BENEATH IT. BLISTERS MAY APPEAR.



THIRD DEGREE BURNS INVOLVE THE OUTER, INNER LAYERS AND THE SUBCUTANEOUS TISSUE.



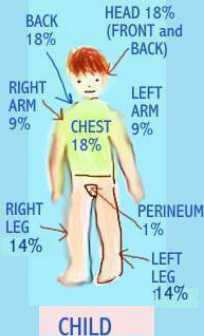
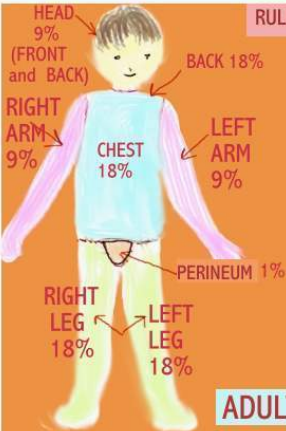
ESCHAR, ((THICK, BLACK TISSUE)) IS SEEN. SKIN GRAFTING MAY BECOME NECESSARY.

FOURTH DEGREE BURNS INVOLVE:



SKIN, MUSCLE AND BONE

RULE OF NINES CHART



THE RULE OF NINES CHART IS USED TO ESTIMATE THE PERCENTAGE OF TOTAL BODY SURFACE AREA WHICH WAS INVOLVED IN BURNS. THIS ALSO SERVES AS A GUIDE TO PROVIDE FLUID REPLACEMENT IN THE BURNT PATIENT.

LUND-BROWDER IS THE PEDIATRIC CHART USED TO ESTIMATE BURN PERCENTAGES.

SAM WAS TREATED AT THE HOSPITAL AND WAS FINALLY SCHEDULED FOR SKIN GRAFTING (SURGICAL PROCEDURE).



SURGERY
IN
PROGRESS

WHEN SKIN GRAFTING IS PERFORMED, HEALTHY SKIN FROM ANOTHER PART OF THE BODY IS REMOVED AND USED TO COVER THE DAMAGED AREA. THIS IS DONE IN SURGERY. PREPARATION OF THE DAMAGED AREA, IS DONE PRIOR TO GRAFTING. THE SKIN IS CONSIDERED TO BE THE LARGEST ORGAN IN THE BODY AND COVERS ITS ENTIRE SURFACE. TYPE OF SKIN GRAFTING DONE, WILL DEPEND ON THE EXTENT OF THE INJURY.



AUTOGRAFT
(HEALTHY
SKIN TAKEN
FROM THE
ANOTHER
AREA OF
THE BODY).



THE LEVEL OF CARE FOLLOWING SURGERY, WILL DEPEND ON THE DEGREE OF SURGICAL INTERVENTION.

COMPLICATIONS OF SKIN GRAFTING INCLUDE:

- INFECTION
- SKIN GRAFT NOT TAKING
- SKIN DISCOLORATION, BLEEDING
- LOSS OF SENSATION TO THE AFFECTED AREA
- POOR HEALING

DONOR SITE - SKIN IS REMOVED FROM ONE AREA OF THE BODY, TO BE USED ELSEWHERE.

TYPES OF SKIN GRAFTING:

- SPLIT-THICKNESS SKIN GRAFT - (WHEN TWO SKIN LAYERS ARE USED IN GRAFTING).
- FULL-THICKNESS SKIN GRAFT (THIS INVOLVES EVEN THE MUSCLE BEING REMOVED FROM THE DONOR SITE. A SKIN GRAFT MAY BE TAKEN FROM THE ABDOMEN AND USED FOR THE FACE.

HOPE YOU
ENJOYED
LEARNING!



VOLKMANN'S
CONTRACTURE



THE CLINICAL SETTING STEP BY STEP (CHAPTER 19)
WWW.DEARNURSES.NET