

Arab Pioneers in Surgery

Ishac Ibn Hunain	Fi Sina'at Al-Ilaj Bil Hadeed
Rhazes (860-932) Galen of Arabs	Liber Continens (23 Vol.)
Hali Abbas (994)	Kamil Al Sina'at or Al Kitab Al Malaki Liber Regius (20 Articles)
Albucasis (936-107) Surgeon of Arabs	Al Tasreef Liman Ajaza An Al Ta'leef (1 Vol.)
Avicenna (980-1037) Prince of Physicians	Al-Qanon Fil Tibb (3 Vol.)
Avenzoar (1094-1162)	Al-Taisir Fil Mudawat Wal Tabdir (2 Vol.)
Averros (1126-1198) Philosopher of Arabs	Kitab Al Kulleyyat
Ibn Al Nafis (1211-1288)	Shar'h Tashreeh Al-Qanon (1 Vol.)
Ibn Al Quff (1233-1286)	Al-Omda Fi Sina'at Al-Jiraha (2 Vol.)
Ibn Abi Usaybia (1269-1303)	Uyun Al Anba Fi Tabaqat Al Atibba (1 Vol.)

Sources of Arab Knowledge on Dissection

1. Greek Books on Animal Dissection e.g. Galen
2. Egyptian Taxidermy and Mummification
3. Arab Dissection on Animals
 - Dead Animals by Rhazes, Ibn Tufail Story
 - Books on Animal anatomy & Behaviour
 - * Hayat Al-Hayawan Al-Kubra (Dumairi)
 - * Aja'eb Al-Maklokat Wal Hayawanat Wa Ghara'eb Al-Mowjoodat (Kizweeni)
 - * Kitab Al-Hayawan (Jahidh)
4. Careful observations of Anatomical Structures and Skeletons of dead bodies e.g. Abdul Latif Al-Baghdadi during Egyptian Famines.
5. Observation of underlying structures during Surgical treatment of wounds due to various accidents and wars.
6. Dissection of Dead Mothers to extract their living babies.
7. Secret Human dissection on dead bodies e.g. Ibn Al Nafis.

History of Arab Surgery

Achievements

Operative Innovations

- * Elevation of legs and buttock in anorectal & Urogenital Surgery
- * Litholapaxy
- * Renal Stone extraction
- * Tracheostomy
- * Urethral dilatation with dilators
- * Aneurysmal ligation with silk
- * Reduction of Shoulder dislocation
- * Albucasis noticed bleeding in Haemophiliacs & used Cautery for haemostasis
- * Operative repair of Imperforate Anus

History of Arab Surgery

Achievements

Instruments

- * Dissection instruments
- * Caustic substances, Cautery and Ligatures
- * Snares for Nasal Polyps, Varicose Veins and Haemorrhoids
- * Leather Bulb Syringe for Rectal enema
- * Lithotrite and metallic Bladder Syringe
- * Urethral Dilators and Sounds
- * Catgut, Linen, Silk, Guitar strands and Ant jaws for suturing
- * Catheters for Urinary Retention
- * Wicks and Tube Drains in Abscess cavities
- * Gypsum in Fractures
- * Gauze and Bandage
- * Tracheostomy tubes
- * Delivery Forceps
- * Glasses and Optics in Ophthalmology

History of Arab Surgery

Achievements

Anatomy and Physiology

- * Sources of Arab Knowledge on Dissection
- * Blood Flow and Circulation (Hali Abbas 994)
 - Systemic Circulation (before W. Harvey 1628)
 - Capillary Circulation (before M. Malpighi 1661)
- * Pulmonary Circulation
(Ibn Al-Nafis 1288 before M. Servatus 1553)
- * Indelible imprints in Medicine
 - Nucha
 - Saphinous
 - Cephalic } Veins
 - Basilic

History of Arab Surgery

Achievements

Clinical Diagnosis

- * Clinical Methods
- * Routine examination of Pulse and Urine
- * Differential Diagnosis e.g. Colic, Renal Pain and Ileus

Introduction of Qualifying Medical Examinations

- * Sinan Ibn Thabit Ibn Qurrah (Baghdad)

History of Arab Surgery

Achievements

Infection and Antisepsis

General

- **Leprosy and Plague Infectivity**
- **Rhazes Decision on the Location of Mu'tadidi Hospital in Baghdad by pieces of meat**
- **Use of Crushed Rotten Bread for Tonsillitis**

Pre-Operative Preparation

- **Cleansing Skin with Alcohol**
- **Cleansing Skin with Soap and Water**
- **Cleansing Skin with Water and Honey**

History of Arab Surgery

Achievements

Chemistry and Pharmacology

- * Drug = Deriak (Drug Cabinet)
- * Soap = Sapon (Cleaning)
- * Alcohol = Alkohool (Cleaning)
- * Camphor = Kafoor (Smell and Massage)
- * Elixir = Exeer (Rejuvenating Essence)
- * Syrup = Sharab (Sweetened Medicine)
- * Odour = Otoor (Nice Smell)
- * Talc = Talk (Body Powder)
- * Borax = Borak

Anaesthesia

- * Use of peri-operative Opium Syrup
- * Anaesthetic Sponge (Hashish/Opium/C-Hyoscine)
- * Use of Ice for Local Anaesthesia
- * Use of Opium Syrup for Postoperative Analgesia