

Syllabus for Ph.D in Shalya Tantra

Shalya Siddhanta – Fundamentals of Surgery

1. Sushruta's contributions in surgical concepts and practices.
2. Knowledge of Dosha, Dhatu and Mala Vigyan and their importance in surgical diseases.
3. Significance and importance of Rakta as the Chaturth Dosha.
4. Yantras and Shastras – Surgical Instruments - Ancient and recent advances.
5. Trividha Karma – Purva, Pradhana and Pashchat Karma and its Importance.
6. Asepsis and Antisepsis.
7. Nirjantukarana – Sterilization – Various methods for surgical equipments, laparoscopes, linen and Operation theatre.
8. Surgical infections – Sepsis, Tetanus and Gas gangrene.
9. Care of patients suffering from Hepatitis, HIV-AIDS, STD and other associated infectious diseases.
10. Ashtavidha Shastra Karma – Critical knowledge and their application in surgical practice.
11. Suturing materials, appropriate use of sutures, drains, prosthetic, grafts and surgical implants.
12. Concept of Marma and their clinical application.
13. Shock - Its varieties and management.
14. Raktasrava / Haemorrhage – Types, Clinical features and Management.
15. Concept of Raktastambhana –Haemostasis.
16. Vranasopha – Inflammation and Vidradhi - Abscess
17. Granthi – Cyst and Arbuda – Benign and malignant Neoplasm – Concept of Oncogenesis and genetics of cancer.
18. Gulma and Udara Roga.
19. Kshudra Roga.
20. Fluid, electrolyte, Acid Base Balance and Nutrition
 - i. Introduction of physiology of fluids and electrolytes.
 - ii. Dehydration and over hydration.
 - iii. Specific electrolyte loss, Acidosis, Alkalosis, Symptomatology and Management.
 - iv. Electrolyte changes in specific surgical conditions and their management.
 - v. Plasma volume expanders and their use in surgical condition.

- vi. Various replacement fluids in surgery, mode of administration and complications.
- vii. Nutrition – Indications, types, mode of administration and complications.

- 21. Blood Transfusion – Blood groups, compatibility, Indications, Contraindications and complications with management.
- 22. Knowledge of antibiotics, analgesics, anti-inflammatory and emergency drugs in surgical practice.

Vishishta Shalya Vigyana - Shalya Tantra Speciality

- 1. Yoga Vidhi - Practical and Experimental training
 - i. Practice of surgical procedures on different models.
 - ii. Training of Laproscopic and Endoscopic procedures.
- 2. Vrana – Wound management
 - i. Management of Nija Vrana, Agantuja Vrana, Dushta Vrana and Nadi Vrana.
 - ii. Vrana Chikitsa – Shasti upakramas, Pathya-apathya .
 - iii. Types and Management of Dagdha Vrana - Burns and scalds.
 - iv. Infection of hands and foot, Diabetic wound, Prameha Pidaka – Diabetic carbuncle and its management.
 - v. Management of Pressure ulcers, Venous ulcers and other chronic non-healing ulcers.
 - vi. Gangrene and its management.
- 3. Mutra Roga – Urological diseases.
 - i. Anatomical and physiological knowledge of kidney, ureter, urinary bladder, prostate, seminal vesicles, urethra and penis.
 - ii. Investigations of Mutravaha Srotas – Urinary tract.
 - iii. Aetiopathogenesis and surgical procedures of Ashmari – Urinary stone diseases.
 - iv. Kidney and ureter – Clinical presentation, Investigations and Management of Congenital anomalies, Trauma, Infection, Neoplasm, Hydronephrosis, Hydroureter and Haematuria.
 - v. Urinary bladder - Clinical presentation, Investigations and Management of Congenital anomalies, Trauma, Infection, Neoplasm, Diverticulum, Vesico-

vaginal fistula, Atony, Schistosomiasis, Urinary diversions, Retention of urine – Mutraghata and Mutrakruccha.

- vi. Urethra - Clinical presentation, Investigations and Management of Congenital anomalies – Hypospadias, Epispadias, Posterior urethral valve, Trauma, Infection, and Neoplasm.
- vii. Prostate and seminal vesicles – Benign and malignant enlargement of prostate, Prostatitis, Prostatic abscess and Calculi.
- viii. Penis – Clinical presentation, Investigations and Management of Congenital anomalies , Trauma, Infection, Phimosis, Paraphimosis, Peyronie’s disease and Neoplasm.
- ix. Testis and scrotum - Clinical presentation, Investigations and Management of Congenital anomalies, Ectopic testis, Trauma, Infection, Neoplasm, Testicular torsion, Hydrocele, Varicocele, Spermatocele, Chylocele, Pyocele, Haematocele, Epididymal cyst and Fournier’s gangrene.
- x. Renal failure – Causes, Diagnosis, Investigations and Management.

4. Asthi roga and Marma Chikitsa - Orthopaedics

- i. Anatomy and physiology of bone.
- ii. Diseases of Asthi / Bone and Sandhi / Joints – Congenital, Degenerative, Infective, Metabolic and Neoplastic Disorders of Bones and Joints.
- iii. Aetiopathogenesis, treatment along with surgical procedures of Bhagna - Fracture, Sandimoksha - Dislocation and bone grafting.
- iv. Diseases of Spine, vertebral column and spinal cord.

Adhunik Shalya Karma - Modern surgery

1. Fundamentals of modern surgery and treatment of surgical disorders including surgical anatomy, physiology and pathology.
2. Diagnosis and Surgical treatment of head and spine injury, thoracic trauma and abdominal trauma. Blast injuries and Management

3. Diagnosis and Surgical management of neck disorders e.g. salivary glands, thyroid, Thyroglossal cyst and Fistula, Branchial cyst and fistula, Cystic hygroma and Lymphadenopathies.
4. Diagnosis and Surgical management of breast diseases, Benign and Malignant breast tumours.
5. Diagnosis and Surgical measures of diseases of Gastrointestinal system -
 - i. Oral cavity - Oral ulcers, Oral cancer, Precancerous conditions, Submucosal fibrosis, Leukoplakia, Cleft lip and palate, Lip tumours, Mucosal cyst, Nasopharyngeal cancer, Tongue ulcer and cancer.
 - ii. Oesophagus - Oesophageal varices, Dysphagia, Neoplasm, Strictures and Gastro oesophageal reflux.
 - iii. Stomach and duodenum –Congenital anomalies, Injuries, Inflammation, Ulcer, Neoplasm, Pyloric stenosis, Acute dilatation ,Hiatus hernia and Foreign bodies.
 - iv. Pancreas - Congenital anomalies, Acute and Chronic pancreatitis, Calculi Neoplasm and Cysts of pancreas.
 - v. Peritoneum, Omentum, Mesentery, Retroperitoneal Space – Peritonitis, Abscess, Neoplasm, Mesenteric cyst, Torsion of mesentery, Vascular thrombosis, Retroperitoneal cyst and Fibrosis.
 - vi. Abdominal mass - Diagnosis and Management.
 - vii. Small intestine - Congenital anomalies, Inflammation, Ulcer, Neoplasm, Stenosis, Injuries, Foreign bodies, Diverticuli, Peutz-jeghers syndrome, Chron's disease, Carcinoid tumours, Enteric perforation and Intestinal fistula.
 - viii. Large intestine - Congenital anomalies, Inflammation, Ulcer, Neoplasm, Stenosis, Injuries, Foreign bodies, Diverticuli, Faecal fistula, Amoebiasis and Familial polyposis coli.
 - ix. Caecum and Vermiform appendix- Appendicitis, Appendicular abscess, Appendicular mass, Perforation, Carcinoid Tumor and other Neoplasm.
 - x. Gastrointestinal bleeding – Haemetemesis, Malaena, Haemobilia, Bleeding per anum - Causes, Diagnosis and Management.
 - xi. Rectum and anal canal - Diagnosis and Surgical management of Congenital Anomalies, Inflammation, Ulcer, Neoplasm, Stenosis, Prolapse, Haemorrhoids,

Fistula-in-ano, Fissure-in-ano, Anorectal Abscess, Incontinence, Injuries, Foreign bodies, Sacrococcygeal Teratomas and Pilonidal sinus .

6. Umbilicus and abdominal wall – Congenital anomalies, Umbilical infections, Sinus, Neoplasm, Abdominal dehiscence, Divarication of recti, Desmoid tumor and Meleney's gangrene.
7. Diagnosis and surgical measures of diseases of Hepatobiliary system -
 - i. Liver – Abscess, Cyst - Hydatid cyst, Primary and Secondary malignant tumours, Portal Hypertension and Budd-Chiari Syndrome.
 - ii. Gall bladder and Bile duct - Congenital anomalies, Acute and Chronic Cholecystitis, Cholelithiasis, Neoplasm, Cholangitis, Stenosis, Choledocholithiasis, Choledochal cyst and Cholangiocarcinoma.
 - iii. Spleen – Splenomegaly and Splenic Injury.
8. Diagnosis and surgical measures for disorders of Artery, Vein, Ligaments, Muscles and Tendons.
9. Diagnosis and surgical management of Hernias – Inguinal, Femoral, Umbilical, Incisional, Abdominal wall and other hernias.
10. Endoscopic procedures - Oesophagogastroduodenoscopy, Sigmoidoscopy and Colonoscopy.
11. Diagnostic and therapeutic laparoscopy.
12. Anaesthesia - Definition, Types, Anesthetic agents, Indications, Contraindications, Procedures, Complications and management.

Shalya Vangmaya – Shalya literature, Research and Development

Thorough study of the Sushruta Samhita including other relevant portions of Brihatrayee and Laghutrayee.

1. Knowledge and importance of Surgical Audit.
2. Medico legal issues – Understanding the implications of acts of omission and commission in practice. Issues regarding Consumer Protection Act, medical profession, national health policy - Implications in a medico-legal case like accidents, assaults etc.
3. Surgical ethics including Informed consent.
4. Knowledge of different type of experimental Surgical Model for Research in Surgery.

5. Sandhana Karma – Plastic reconstructive and cosmetic surgery.
Fundamentals of Sandhana Karma –
- i. Karna Sandhana – Auroplasty
 - ii. Nasa Sandhana – Rhinoplasty
 - iii. Ostasandhana – Cheiloplasty
 - iv. Grafts and Flaps – Techniques and applications.
 - v. Vascular anastomosis and grafts.
6. **Anushalya Karma** – Parasurgical procedures
Kshara Karma, Kshara Sutra, Agnikarma and Raktamoskhana.

Reference Books

1. Sushruta Samhita
2. Ashtanga Sangraha
3. Ashtanga Hridaya
4. Charaka Samhita
5. The Surgical instruments of the Hindus - Girindranath Mukhopadhyaya
6. Shalya Tantra Samuchchaya - Pandit Ramadesh Sharma
7. Shalya Vigyan (Part 1-2) - Dr. Surendra Kumar Sharma
8. Shalya Samanvaya (Part 1-2) - Vd. Anantaram Sharma
9. Shalya Pradeepika - Dr. Mukund Swaroop Verma
10. Sushruti - Dr. Ram Nath Dwivedi
11. Clinical Shalya Vigyan - Dr. Akhilanand Sharma
12. Bhagna Chikitsa - Dr. Prabhakar Janardhan
Deshpande
13. Kshara sutra management in anorectal ailments - Dr. S.K. Sharma, Dr. K.R.Sharma
and Dr. Kulwant Singh.
14. Anorectal diseases in Ayurveda - Dr. Sizoria and Dr. Praveen Kumar
Chowdary.
15. Adhunik Shalya Chikitsa Siddanta - Dr. Katil Narshingham Udupa
16. Agnikarma Technology Innovation - Dr. P.D. Gupta

17. Shalya Tantra Ke Siddhant - Dr. K.K.Takral
18. Recent advances in the management of Arshas / Haemorrhoids - Dr. P. Hemantha Kumar
19. Arsha Evum Bhagander Mein sutra Avacharan - Vd. Kanak Prasad Vyas
20. Recent advances in Kshara Sutra - Dr. M. Bhaskar Rao
21. Leech application in Ayurveda - Dr. M. Bhaskar Rao
22. Kshara Sutra - Dr. S.N.Pathak
23. Shalya Shalaky Tantra - Vd. S.G. Joshi
24. Surgical ethics of Ayurveda - Dr. D.N. Pande
25. Text book of Surgery - Sabistan
26. Operative Surgery - Rob and smith
27. Bailey and Love's Short Practice of Surgery - Norman.S. Williams, Charles.V. Mann and R.C.G. Russell
28. Fractures and Joint Injuries - Watson-Jones
29. Text books of Operative Surgery - Farquharsons'
30. Principles of Surgery - Schwartz
31. Emergency Surgery -Hamilton Bailey's
32. Surgical pathology - Willing Worth
33. Clinical methods in surgery - S. Das
34. Textbook of Operative Surgery - S. Das
35. Shalya Vigyan (Sachitra) - Anantram Sharma
36. Anushastra Karma - Dr. D.N. Pande
37. Concept of Vrana is Ayurveda - Dr. Lakshman Singh
38. Significance for Poorva Karma in Surgical Patient - Dr. Lakshman Singh
39. Sangyahan Prakash - Dr. D.N. Pande
40. A concise Text Book of Surgery - S. Das
41. A manual on Clinical Surgery - S. Das
42. A System of Surgical Diagnosis - T.N. Patel
43. A Practical Guide to Operative Surgery - S. Das
44. Drugs and Equipment for Anaesthesia - Arun kumar
45. Manual of Surgical Instruments - M.M. Kapur
46. Ward Procedures - Patel Mansukh. B

47. Recent trends in the management of Arshas / Haemorrhoids - Dr. P. Hemantha Kumar
48. Primary Anaesthesia - Maurice King
49. Synopsis of Anaesthesia - Lee
50. Clinical Anatomy/ Surgical Anatomy - John E. Skandalakis
51. Surgical Instruments of the Hindus - Girindharnath Mukopadyay
52. Outline of Orthopedics - John Crawford Adams and David
Hamblen. L
53. Outline of Fracture - John Crawford Adams
54. Recent trends in the management of Bhagandara / Fistula-in-ano - Dr. P. Hemantha
Kumar
55. Principles and Practice of Agnikarma - Dr. Anand Kumar and Dr. Kanchan
Shekokar.
56. Manipal Manual of Surgery - Dr. Rajgopal Shenoy