



ODISHA UNIVERSITY OF HEALTH SCIENCES, BHUBANESWAR



PG Curriculum M.Ch. Urology

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Curriculum
M.Ch. Urology

The infrastructure and faculty of the department of Urology will be as per NMC guidelines

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1. Goals

The goal of M.Ch. course is to produce a competent physician who:

- 1.1. Recognizes the health needs of adults and carries out professional obligations in keeping with principles of National Health Policy and professional ethics;
- 1.2. Has acquired the competencies pertaining to Urology that are required to be practiced in the community and at all levels of health care system;
- 1.3. Has acquired skills in effectively communicating with the patients, family and the community;
- 1.4. Is aware of the contemporary advances and developments in medical sciences;
- 1.5. Acquires a spirit of scientific enquiry and is oriented to principles of research methodology;
- 1.6 Has acquired skills in educating medical and paramedical professionals.

2. Objectives

At the end of the MCh course in Urology, the student should be able to:

- 2.1 Recognize the key importance of medical problems in the context of the health priority of the country;
- 2.2 Practice the specialty of Urology in keeping with the principles of Professional ethics;
- 2.3 Identify social, economic, environmental, biological and emotional Determinants of adult Urology and know the therapeutic, rehabilitative, Preventive and promotion measures to provide holistic care to all patients;
- 2.4 Take detailed history, perform full physical examination and make a Clinical diagnosis;
- 2.5 Perform and interpret relevant investigations (Imaging and Laboratory); Perform and interpret important diagnostic;
- 2.6 Diagnose Urological illnesses in adults based on the analysis of history, Physical examination and investigative work up;
- 2.7 Plan and deliver comprehensive treatment for illness in adults using Principles of rational drug therapy;
- 2.8 Plan and advise measures for the prevention of Urological diseases;
- 2.9 Plan rehabilitation of adults suffering from chronic illness, and those with special needs;
- 2.10 Manage Urological emergencies efficiently;
- 2.11 Demonstrate skills in documentation of case details, and of morbidity and mortality data relevant to the assigned situation;
- 2.12 Demonstrate empathy and humane approach towards patients and their families and respect their sensibilities;
- 2.13 Demonstrate communication skills of a high order in explaining management and prognosis, providing counseling and giving health education messages to patients, families and communities.
- 2.14 Develop skills as a self-directed learner, recognize continuing educational needs; use appropriate learning resources, and critically analyze relevant published literature in order to practice evidence-based medicine;
- 2.15 Demonstrate competence in basic concepts of research methodology and epidemiology;
- 2.16 Facilitate learning of medical/nursing students, practicing physicians, para-medical health workers and other providers as a teacher-trainer;
Play the assigned role in the implementation of national health programs, effectively and responsibly;
- 2.17 Organize and supervise the desired managerial and leadership skills;
Function as a productive member of a team engaged in health care, research and education.

3 . Syllabus

3.1 Theory

a. Anatomy

Surgical Anatomy of the Retro peritoneum, Kidneys and Ureters
Anatomy of the Lower Urinary Tract and Male Genitalia

b. Clinical Decision Making

Evaluation of the Urologic Patient: History, Physical Examination, and Urinalysis
Urinary Tract Imaging: Basic Principles Outcomes Research

c. Basics of Urologic Surgery

d. Infections and Inflammation

Infections of the Urinary Tract

Inflammatory Conditions of the Male Genitourinary Tract

Interstitial Cystitis and Related Disorders

Sexually Transmitted and Associated Diseases Urological

Implications of AIDS and Related Conditions Cutaneous
Diseases of the External Genitalia

Tuberculosis and Other Opportunistic Infections of the Genitourinary System

e. Molecular and Cellular Biology

Basic Principles of immunology Molecular

Genetics and Cancer Biopsy

Tissue Engineering Perspectives for Reconstructive Surgery

f. Reproductive and Sexual Function

Male Reproductive Physiology

Male Infertility

Surgical Management of Male Infertility

Physiology of Erectile Dysfunction: Pathophysiology, Evaluation, Nonsurgical Management

Epidemiology, Evaluation, and Nonsurgical Management of Erectile Dysfunction Prosthetic Surgery for
Erectile Dysfunction

Vascular Surgery for Erectile Dysfunction Peyronie's

Disease Priapism

Androgen Deficiency in the Aging Male Female

Sexual Function and Dysfunction

g. Male Genitalia

Neoplasms of the Testis

Surgery of Testicular Tumors

Tumors of the Penis

Surgery of Penile and Urethral Carcinoma

Surgery of the Penis and Urethra

Surgery of the Scrotum and Seminal Vesicles

h. Renal Physiology and Pathophysiology

Renal Physiology and Pathophysiology

Renovascular Hypertension

i. Urinary Tract Obstruction and Trauma

Pathophysiology of Obstruction

Management of Upper Urinary Tract Obstruction Upper Urinary Tract Trauma

j. Renal Failure and Transplantation

Renal Transplantation

Etiology, Pathogenesis, and Management of Renal Failure

k. Urinary Lithiasis and Endourology

Urinary Lithiasis : Etiology, Epidemiology, and Pathophysiology Evaluation and Medical Management of Urinary Lithiasis Surgical Management of Upper Urinary Tract Calculi Ureteroscopy and Retrograde Ureteral Access

Percutaneous Approaches to the Upper Urinary Tract

l. Neoplasms of the Upper Urinary Tract

Renal Tumors

Urothelial Tumors of the Upper Urinary Tract Urothelial Tumors of the Renal Pelvis and Ureter Open surgery of the Kidney

Laparoscopic Surgery of the Kidney Ablative

Therapy for Renal Tumors

m. The Adrenals

Pathophysiology, Evaluation, and Medical Management of Adrenal Disorders Surgery of the Adrenals

n. Urine Transport, Storage, and Emptying

Physiology and Pharmacology of the Renal Pelvis and Ureter

Physiology and Pharmacology of the Bladder and Urethra

Pathophysiology, Categorization, and Management of Voiding Dysfunction

Urodynamic and Video dynamic Evaluation of Voiding Dysfunction

Neuromuscular Dysfunction of the Lower Urinary Tract

Urinary Incontinence : Epidemiology, Pathophysiology, Evaluation, and Overview of

-Management

The Overactive Bladder

-Pharmacologic Management of Storage and Emptying Failure

Conservative Management of Urinary Incontinence : Behavioral and Pelvic Floor Therapy, Urethral and Pelvic Devices

Electrical Stimulation and Neuromodulation in Storage and Emptying Failure

Retropubic Suspension Surgery for Incontinence in Women

Vaginal Reconstructive Surgery for Sphincteric Incontinence Pubovaginal Slings

Tension-Free Vaginal Tape Procedures Injection

Therapy for Urinary Incontinence

Additional Treatment for Storage and Emptying Failure Geriatric

Voiding Dysfunction and Urinary Incontinence Urinary Tract Fistulae

Bladder and Urethral Diverticula

Surgical Procedures for Sphincteric Incontinence in the Male : The Artificial Genitourinary Sphincter; Perineal Sling Procedures

o. Bladder ; Lower Genitourinary Calculi and Trauma

Urothelial Tumors of the Bladder Management of Superficial Bladder Cancer

Management of Metastatic and Invasive Bladder Cancer Surgery of Bladder Cancer

Laparoscopic Bladder Surgery

Use of Intestinal Segments in Urinary Diversion

Cutaneous Continent Urinary Diversion Orthotopic

Urinary Diversion

Genital and Lower Urinary Tract Trauma Lower
Urinary Tract Calculi

p. Prostate

Molecular Biology, Endocrinology, and Physiology of the Prostate and Seminal Vesicles Etiology, Pathophysiology, and Epidemiology of Benign Prostatic Hyperplasia Natural History, Evaluation, and Nonsurgical Management of Benign Prostatic Hyperplasia Minimally Invasive and Endoscopic Management of Benign Prostatic Hyperplasia Retropubic and Suprapubic Open Radical Prostatectomy

Epidemiology, Etiology, and Prevention of Prostate Cancer

Pathology of Prostatic Neoplasms

Ultrasonography and Biopsy of the Prostate Tumor

Markers in Prostate Cancer

Early Detection, Diagnosis, and Staging of Prostate Cancer

Definitive Therapy of Localized Prostate Cancer : Outcomes Expectant Management of Prostate Cancer

Anatomic Retrograde Retropubic Prostatectomy

Radical Perineal Prostatectomy

Laparoscopic and Robotic Radical Prostatectomy and Pelvic

Lymphadenectomy Radiation Therapy for Prostate Cancer

Cryotherapy of Prostate Cancer

Treatment of Locally Advanced Prostate Cancer

Management of Rising Prostate-Specific Antigen after Definitive Therapy

Hormonal Therapy for Prostate Cancer Management of Hormone-Resistant Prostate Cancer

q. Pediatric Urology

Normal and Anomalous Development of the Urinary Tract

Renal Function in the Fetus

Congenital Obstructive Uropathy

Perinatal Urology

Evaluation of Pediatric Urologic Patient

Renal Disease in Childhood

Urinary Tract Infections in Infants and Children

Anomalies of the Kidney

*Renal Dysplasia and Cystic Disease of Kidney Anomalies
and Surgery of the Ureteropelvic Junction Ectopic Ureter*

Vesicoureteral Reflux

Prune-Belly Syndrome

Exstrophy and Epispadias Complex

Surgical Technique for One-Stage Exstrophy Reconstruction Bladder

Anomalies in Children

Posterior Urethral Valves and Other Urethral Anomalies

Voiding Dysfunction in Children : Neurogenic and Non-neurogenic

Urinary Tract Reconstruction

Hypospadias

Abnormalities of External Genitalia in Boys

Abnormalities of Testis and Scrotum: Surgical Management Sexual

Differentiation : Normal and Abnormal

Surgical Management of Intersex Pediatric

Oncology

Pediatric Endourology and Laparoscopy Pediatric

Genitourinary Trauma

3.2. Practical:

History, examination and writing of records:

History taking should include the background information, presenting complaints and the history of present illness, history of previous illness, family history, social and occupational history and treatment history.

Detailed physical examination should include general physical and CVS examination

Skills in writing up notes, maintaining problem-oriented medical records (POMR), progress notes, and presentation of cases during ward rounds, planning investigation and making a treatment plan should be taught.

Other Urology procedures- investigative Urological Procedures like uroflowmetry, CNG Doppler, Ultrasound & Ultrasound guided procedures.

3.3. Clinical Teaching

General, Physical and specific examinations of Genitourinary should be mastered. The resident should be able to analyze history and correlate it with Clinical findings. He should be well versed with all radiological procedures like IVU, Nephrostogram and RGP, Ascending urethrogram. He should present his daily admissions in morning report and try to improve management skills, fluid balance, choice of drugs. He should clinically analyse the patient & decide for pertinent Investigations required for specific patient.

4. Teaching Programme

4.1 General Principles

Acquisition of practical competencies being the keystone of postgraduate medical education, postgraduate training is skills oriented.

Learning in postgraduate program is essentially self-directed and primarily emanating from clinical and academic work. The formal sessions are merely meant to supplement this core effort.

4.2 Teaching Sessions

The teaching methodology consists of bedside discussions, ward rounds, case presentations, clinical grand rounds, statistical meetings, journal club, lectures and seminars.

Along with these activities, trainees should take part in inter-departmental meetings i.e clinico-pathological and clinico-radiological meetings that are organized regularly.

Trainees are expected to be fully conversant with the use of computers and be able to use databases like the Medline, Pubmed etc.

They should be familiar with concept of evidence based medicine and the use of guidelines available for managing various diseases.

4.3 Teaching Schedule

Following is the suggested weekly teaching programme in the Department of Urology:

Sl.No.	Description	Frequency
1	Case Presentation & Discussion	Once a week
2	Seminar	Twice a week
3	Journal Club	Once a week
4	Grand Round Presentations	Once a week
5	Emergency case discussions	Once a week
6	Statistical & Mortality Meet	Once a week
7	Clinico- Pathological Meet	Once a week
8	Clinico- Radiological Meet	Once a week
9	Clinico- Surgical Meet	Once a week

Each unit should have regular teaching rounds for residents posted in that unit. The rounds should include bedside case discussions, file rounds (documentation of case history and examination, progress notes, round discussions, investigations and management plan), interesting and difficult case unit discussions.

Central hospital teaching sessions will be conducted regularly and DM residents would present interesting cases, seminars and take part in clinico-pathological case discussions.

4.4 Conferences and Papers

A resident must attend at least one conference per year. One paper must be presented in at least 3 years.

5. Schedule of Postings

OPD 6 days a week

OT 6 days a week

Investigative urology All Days

The MCh resident is expected to do daily ward rounds at 8 AM in the morning and evening between 5 Pm to 7 PM along with PG resident.

The MCh resident should do the dressing of the patient that have been operated/ assisted by them.

The MCh resident should note down the history and examination of admitted patients and should daily put progress note in files.

The normal working hours will be from 8 AM to 8 PM. When on emergency duty, the resident is supposed to stay overnight in the resident room.

LOG BOOK:

- The student will maintain a log book of all the procedures.
- The student will be graded as per his clinical & technical skill performance.

- The student has observed the procedures as an assistant.
- The part of the procedures performed under direct supervision.
- The procedure performed with assistance.
- The purpose of training is to grade the skills and evaluate the ability to take decisions.

The resident will be assessed once every year in the form of theory test at the end of each academic year.

6. Research Projects

Every candidate shall carry out work on an assigned research project under the guidance of a recognized postgraduate teacher, the project shall be written and submitted in the form of a Project.

Every candidate shall submit project plan to university within time frame set by university

Thesis shall be submitted to the University within 9 months of joining the course.

The student will (i) identify a relevant research problem, (ii) conduct a critical review of literature, (iii) formulate a hypothesis, (iv) determine the most suitable study design, (v) state the objectives of the study, (vi) prepare a study protocol, (vii) undertake a study according to the protocol, (viii) analyze and interpret research data, and draw conclusion, (ix) write a research paper.

7. Assessment

All the MCh residents are assessed daily for their academic activities and also periodically. **7.1. 7.1 General Principles**

The assessment is valid, objective and reliable

It covers cognitive, psychomotor and affective domains.

Formative, continuing and summative (final) assessment is also conducted in theory as well as practical. In addition, research project is also assessed separately.

7.2. Formative Assessment

The formative assessment is continuous as well as end of term.

The former is based on the feedback from the consultants concerned. Formative assessment will provide feedback to the candidate about his/her performance and help to improve in the areas they lack.

Record of internal assessment should be presented to the board of examiners for consideration at the time of final examination.

7.3. Internal Assessment

The performance of the resident during the training period should be monitored throughout the course and duly recorded in the log books as evidence of the ability and daily work of the student. Marks should be allotted out of 100 as followed.

Sr. No.	Items	Marks
1.	Personal Attributes	20
2.	Clinical Work	20
3.	Academic activities	20
4.	End of term theory	20
5.	End of term practical	20

1. Personal attributes:

Behavior and Emotional Stability: Dependable, disciplined, dedicated, stable in emergency situations, shows positive approach.

Motivation and Initiative: Takes on responsibility, innovative, enterprising, does not shirk duties or leave any work pending.

Honesty and Integrity: Truthful, admits mistakes, does not cook up information, has ethical conduct, exhibits good moral values, loyal to the institution.

Interpersonal Skills and Leadership Quality: Has compassionate attitude towards patients - and attendants, gets on well with colleagues and paramedical staff, is respectful to seniors, has good communication skills.

2. Clinical Work:

Availability: Punctual, available continuously on duty, responds promptly on calls and takes proper permission for leave.

Diligence: Dedicated, hardworking, does not shirk duties, leaves no work pending, does not sit idle, competent in clinical case work up and management.

Academic ability: Intelligent, shows sound knowledge and skills, participates adequately in academic activities, and performs well in oral presentation and departmental tests. **Clinical Performance:**

Proficient in clinical presentations and case discussion during rounds and OPD work up. Preparing Documents of the case history/examination and progress notes in the file (daily notes, round discussion, investigations and management) Skill of performing bed side procedures and handling emergencies.

3. Academic Activity: Performance during presentation at Journal club/ Seminar/ Case discussion/Stat meeting and other academic sessions. Proficiency in skills as mentioned in job responsibilities.

4. End of term theory examination conducted at end of 1st , 2nd year and after 2 years 9 months

5. End of term practical/oral examinations after 2 years 9 months.

Marks for **personal attributes** and **clinical work** should be given annually by all the consultants under whom the resident was posted during the year. Average of the three years should be put as the final marks out of 20.

Marks for **academic activity** should be given by the all consultants who have attended the session presented by the resident.

The Internal assessment should be presented to the Board of examiners for due consideration at the time of Final Examinations.

7.4. Summative Assessment

Ratio of marks in theory and practical will be equal. The pass percentage will be 50%.

Candidate will have to pass theory and practical examinations separately.

A. Theory examination

Sr. No.	Title	Marks
Paper -I	Basic Sciences as related to Urology	100
Paper-II	Clinical Urology	100
Paper-III	Operative Urology	100
Paper-IV	Recent advances in Urology	100
Total		400

B. Practical & Viva-Voce Examination

Sr. no		Marks
1.	Long Case (1)	100
2.	Short Cases(2)75 marks each	150
3.	Procedure	50
4.	Grand Viva including In struments/Radiology/Pathology	100
Total		400

8. Job Responsibilities

Outdoor Patient (OPD) Responsibilities

- The working of the residents in the OPD should be fully supervised.
- They should evaluate each patient and write the observations on the OPD card with date and signature.
- Investigations should be ordered as and when necessary using prescribed forms.
- Residents should discuss all the cases with the consultant and formulate a management plan.
- Patient requiring admission according to resident's assessment should be shown to the consultant on duty.
- Patient requiring immediate medical attention should be sent to the casualty services with details of the clinical problem clearly written on the card.
- Patient should be clearly explained as to the nature of the illness, the treatment advice and the investigations to be done.
- Resident should specify the date and time when the patient has to return for follow up.

In-Patient Responsibilities

Each resident should be responsible and accountable for all the patients admitted under his care. The following are the general guidelines for the functioning of the residents in the ward:

- Detailed work up of the case and case sheet maintenance:

- He/She should record a proper history and document the various symptoms. Perform a proper patient examination using standard methodology. He should develop skills to ensure patient comfort/consent for examination. Based on the above evaluation he/she should be able to formulate a differential diagnosis and prepare a management plan. Should develop skills for recording of medical notes, investigations and be able to properly document the consultant round notes.
- To organize his/her investigations and ensure collection of reports.
- Bedside procedures for therapeutic or diagnostic purpose.
- Presentation of a precise and comprehensive overview of the patient in clinical rounds to facilitate discussion with senior residents and consultants
- To evaluate the patient twice daily (and more frequently if necessary) and maintain a progress report in the case file.
- To establish rapport with the patient for communication regarding the nature of illness and further plan management.
- To write instructions about patient's treatment clearly in the instruction book along with time, date and the bed number with legible signature of the resident.
- All treatment alterations should be done by the residents with the advice of the concerned consultants and senior residents of the unit.

Admission day

Following guidelines should be observed by the resident during admission day.

- Resident should work up the patient in detail and be ready with the preliminary necessary investigations reports for the evening discussion with the consultant on duty.
- After the evening round the resident should make changes in the treatment and plan out the investigations for the next day in advance.

Doctor on Duty

- Duty days for each Resident should be allotted according to the duty roster.
- The resident on duty for the day should know about all sick patients in the wards and relevant problems of all other patients, so that he could face an emergency situation effectively.
- In the morning, detailed over (written and verbal) should be given to the next resident on duty. This practice should be rigidly observed.
- If a patient is critically ill, discussion about management should be done with the consultant at any time.
- The doctor on duty should be available in the ward through out the duty hours.

Care of Sick Patients

- Care of sick patients in the ward should have precedence over all other routine work for the doctor on duty.
- Patients in critical condition should be meticulously monitored and records maintained.
- If patient merits ICU care then it must be discussed with the senior residents and consultants for transfer to ICU.

Resuscitation skills

At the time of joining the residency programme, the resuscitation skills should be demonstrated to the residents and practical training provided at various work stations.

- Residents should be fully competent in providing basic and advanced cardiac life support.
- They should be fully aware of all advanced cardiac support algorithms and be aware of the use of common resuscitative drugs and equipment like defibrillators and external cardiac pacemakers.
- The resident should be able to lead a cardiac arrest management team.

Discharge of the Patient

- Patient should be informed about his/her discharge one day in advance and discharge cards should be prepared 1 day prior to the planned discharge.

- The discharge card should include the salient points in history and examination, complete diagnosis, important management decisions, hospital course and procedures done during hospital stay and the final advice to the patient.
- Consultants and DM Residents should check the particulars of the discharge card and counter sign it.
- Patient should be briefed regarding the date, time and location of OPD for the follow up visit.

In Case of Death

- In case it is anticipated that a particular patient is in a serious condition, relatives should be informed about the critical condition of the patient beforehand.
- Residents should be expected to develop appropriate skills for breaking bad news and bereavements.
- Follow up death summary should be written in the file and face sheet notes must be filled up and the sister in charge should be requested to send the body to the mortuary with respect and dignity from where the patient's relatives can be handed over the body.
- In case of a medico legal case, death certificate has to be prepared in triplicate and the body handed over to the mortuary and the local police authorities should be informed.
- Autopsy should be attempted for all patients who have died in the hospital especially if the patient died of an undiagnosed illness.

Bedside Procedures

The following guidelines should be observed strictly:

- Be aware of the indications and contraindications for the procedure and record it in the case sheet. Rule out contraindications like low platelet count, prolonged prothrombin time, etc.
- Plan the procedure during routine working hours, unless it is an emergency. Explain the procedure with its complications to the patient and his/her relative and obtain written informed consent on a proper form. Perform the procedure under strict aseptic precautions using standard techniques. Emergency tray should be ready during the procedure.
- Make a brief note on the case sheet with the date, time, nature of the procedure and immediate complications, if any.
- Monitor the patient and watch for complications(s).

OT responsibilities

- The 1st year resident observes the general layout and working of the OT, understands the importance of maintaining sanctity of the OT, scrubbing, working and sterilization of all the OT Instrument, knowhow of endoscopes.
- He/ She is responsible shifting for of OT patients, for participating in surgery as 2nd assistant and for post operative management of patient in recovery and in ward. The 2nd year resident is responsible for pre op work up of the patient, surgical planning and understanding the rationale of surgery. He/she is the first assistant in surgery and is responsible for anticipating intra op and post op complications and managing them. The final year resident should be able to perform minor/medium/major surgeries independently and assist in medium/major/extra major surgeries. He/she should be able to handle all emergencies and post op complications independently and is responsible for supervision and guidance of his/her juniors.

Medico-Legal Responsibilities of the Residents

- All the residents are given education regarding medico-legal responsibilities at the time of admission in a short workshop.
- They must be aware of the formalities and steps involved in making the correct death certificates, mortuary slips, medico-legal entries, requisition for autopsy etc.

- They should be fully aware of the ethical angle of their responsibilities and should learn how to take legally valid consent for different hospital procedures & therapies.
- They should ensure confidentiality at every stage.

9. Suggested Books

9.1. Books

Campbells Urology Glenns

Urology Year book of Urology

Recent advances in Urology Emmetts Clinical Uroradiology

Mc Anirich Trauma of Genitourinary Tracts

Libertino-Pediatric And Adult Reconstructive Urologic Surgery Richie

& Damico-Urologic Oncology

Stroky-Handbook of urology diagnosis and therapy Allen D

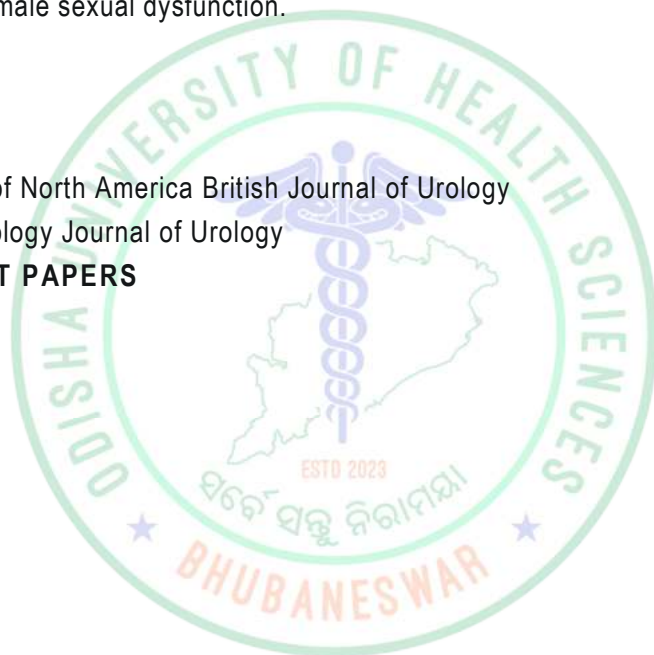
Seftel-male and female sexual dysfunction.

9.2. Journals

Urological clinics of North America British Journal of Urology

Journal of endourology Journal of Urology

10. MODEL TEST PAPERS



MODEL TEST PAPERS

MCh Urology

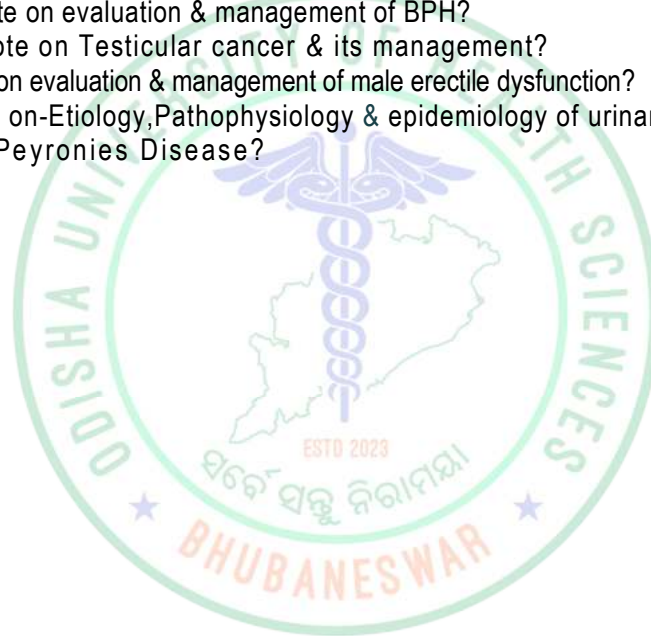
Paper - I

BASIC SCIENCES AS RELATED TO UROLOGY

Maximum Marks: 100

Time : 3 Hours

- Attempt **ALL** questions.
 - Answer each question and its parts in **SEQUENTIAL ORDER**.
 - **ALL** questions carry equal marks.
 - Illustrate your answer with **SUITABLE DIAGRAMS**.
- Q1:- Write a note on Genitourinary Tuberculosis and its management ?
- Q2:- Write a note on pathophysiology of erectile dysfunction and its management?
- Q3:- Write are the urological implications of AIDS on genitourinary system and its management?
- Q4:- Write a note on evaluation & management of upper urinary tract calculi?
- Q5:- Write a note on Neurogenic & Non neurogenic urinary bladder?
- Q6:- Write a note on evaluation & management of BPH?
- Q7:- Write a note on Testicular cancer & its management?
- Q8:- Write note on evaluation & management of male erectile dysfunction?
- Q9:- Write note on-Etiology,Pathophysiology & epidemiology of urinary calculi?
- Q10:- Note on Peyronies Disease?



MODEL TEST PAPERS

MCh Urology

Paper - II

Clinical Urology

Maximum Marks : 100

Time : 3 Hours

- Attempt **ALL** questions.
- Answer each question and its parts in **SEQUENTIAL ORDER**.
- **ALL** questions carry equal marks.
- Illustrate your answer with **SUITABLE DIAGRAMS**.

Q1:- Write about complications of PCNL ?

Q2:- Write about vascular surgeries for erectile dysfunction?

Q3:- Write about surgery for penile & urethral carcinoma?

Q4:- Surgical management of upper urinary tract calculi?

Q5:- Write about Laparoscopic surgery of renal tumors?

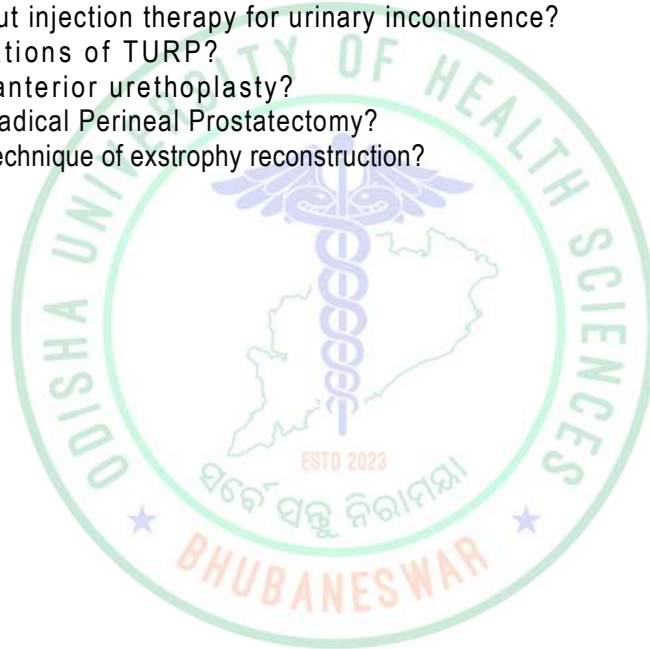
Q6:- Write about injection therapy for urinary incontinence?

Q7:- Complications of TURP?

Q8:- Note on anterior urethoplasty?

Q9:- Note on Radical Perineal Prostatectomy?

Q10:- Surgical Technique of exstrophy reconstruction?



MODEL TEST PAPERS
MCh Urology
Paper - III
Operative Urology

Maximum Marks : 100

Time : 3 Hours

- Attempt **ALL** questions.
- Answer each question and its parts in **SEQUENTIAL ORDER**.
- **ALL** questions carry equal marks.
- Illustrate your answer with **SUITABLE DIAGRAMS**.

Q1:- Role of Diagnostic laparoscopy in urology?

Q2:- Newer contrast media pertaining to urology?

Q3:- Evaluation of patient of Interstitial cystitis?

Q4:- Urodynamic evaluation in voiding dysfunction?

Q5:- Ureteroscopy & its uses?

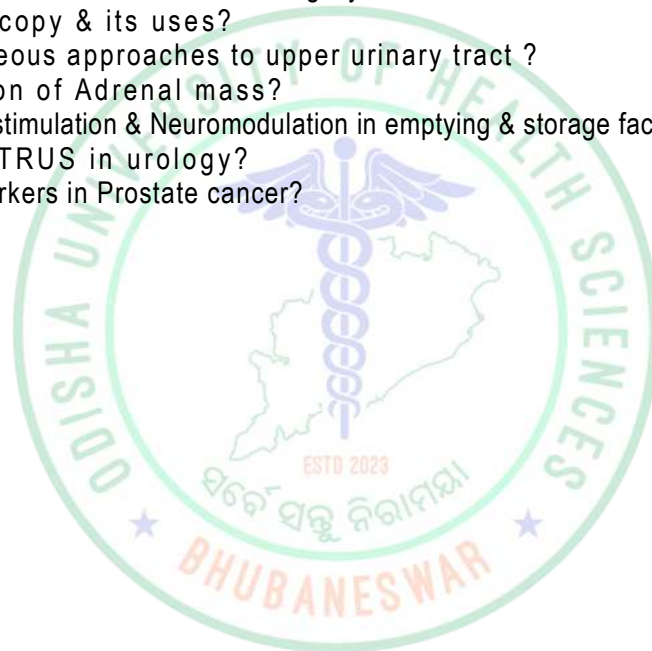
Q6:- Percutaneous approaches to upper urinary tract ?

Q7:- Evaluation of Adrenal mass?

Q8:- Electrical stimulation & Neuromodulation in emptying & storage factor of Urinary Bladder?

Q9:- Uses of TRUS in urology?

Q10:- Tumor markers in Prostate cancer?



MODEL TEST PAPERS
MCh Urology
Paper - IV
Recent Advances in Urology

Maximum Marks : 100

Time : 3 Hours

- Attempt **ALL** questions.
- Answer each question and its parts in **SEQUENTIAL ORDER**.
- **ALL** questions carry equal marks.
- Illustrate your answer with **SUITABLE DIAGRAMS**.

Q1:- Newer management techniques of Interstitial cystitis?

Note on ablative therapies of renal tumors?

Q2:- Cryotherapy of prostate cancer?

Q3:- Molecular genetics & cancer biology of renal cell carcinoma?

Q4:- Tissue engineering perspectives for reconstructive surgery in urology?

Q5:- Role of immune modulators in renal cell carcinoma?

Q6:- Newer techniques in management of male infertility?

Q7:- Note on orthotopic urinary diversion?

Q8:- Tumor markers in urology?

Q9:- Recent advances in treatment of interstitial cystitis?

