Contents

ec	tion 1: Robot and Surgery	
1.	Robotic Surgery: Past, Present and Future	3
	Naresh Trehan	
	Past 3	
	Present 3	
	Future of Robotic Surgery 5	
2.	Ergonomics	6
	Megha Bhatnagar, Aditi Midha	
	Impact on Musculoskeletal System 6	
	Muscular Load and Disorders 6	
	Challenges in the Operation Room 7	
	Appropriate Posture 7	
	Need for Exercise and Physical Activity 7	
	Postural Advice to Counter Effects of Work 8	
	Quick Fit Break that Can Help! 8	
3.	Immunofluorescence and Robotic Surgery	10
	Vivek Bindal, Anand Kumar Yadav	
	Clinical Applications of Immunofluorescence Imaging in General Surgery 11	
	Other Applications in Robotic Surgery 14	
	Future Applications 14	
1	Anesthesia	47
Т.		17
	Sangeeta Khanna, Jyotirmoy Das, Yatin Mehta	
	Preoperative Preparation 17	
	Intraoperative Management 17	
	Patient Positioning 18 Few Systemic Consideration in Con	
	Few Systemic Considerations in Steep Trendelenburg Position 19 Anesthesia for Transcral Reports Systems 22	
	Anesthesia for Transoral Robotic Surgery 20 Robot-assisted Minimally Investiga Parad Transplantation 20	
	Robot-assisted Minimally Invasive Renal Transplantation 20 Robot-assisted Esophagectomy 21	
	250phageotomy 21	

S	ect	tion 2: General Surgery	
	5.	Robot-assisted Sleeve Gastrectomy	27
		Parveen Bhatia, Vivek Bindal, Anand Kumar Yadav	
		Surgical Procedure 27	
		Review of Literature 31	
		Discussion 31	
	6.	Robot-assisted Roux-en-Y Gastric Bypass	33
		Parveen Bhatia, Vivek Bindal, Anand Kumar Yadav	
		Advantages of Robotic Roux-en-Y Gastric Bypass 33	
		Surgical Techniques 34	
		Perioperative Care 37	
		Robotic RYGB: Current Status and Future 38	
	7.	Robotic Surgery for Benign Colorectal Diseases	40
		Deepak Govil, Vivek Tandon, Vachan Hukkeri, Satyaprakash Jindal, Adithya GK	
		Right Hemicolectomy 40	
		Transverse Colectomy 41	
		Left and Sigmoid Colectomy 42	
		Total Proctocolectomy with Pouch Ileo-anal Anastomoses 43	
		Rectopexy 43	
	8.	Carcinoma Rectum	47
		Somashekhar SP	
		Laparoscopic Surgery in Rectal Cancer 47	
		Preoperative Preparation and Precautions 48	
		Anesthesia 48	
		Robotics in Rectal Cancer 50	
		Short-term Clinical Outcomes 50	
		Indian Experience 52	
		Ongoing Trials 52	
	9.	Robotic Surgery for Bile Duct Tumors	55
		Vivek Bindal, Anand Kumar Yadav	
		Surgical Treatment 55	

xiv

Palliative Surgery 59
Liver Transplantation 59
Postoperative Outcomes 59

Sec	tion 3: Thoracic and Vascular Surgery	68 H
10	. Thymus Arvind Kumar, Belal Bin Asaf	63
	Robotic Surgery for Thymus and Anterior Mediastinum 63	
	Preoperative Preparation and Precautions for Patients Undergoing Thymectomy Anesthesia and Position 64	
	Port Placement 65	
	Docking 65	
11.	. Lung Resection	68
	Belal Bin Asaf, Arvind Kumar	
	Indications 68	
	Preoperative Preparation and Precautions 68	
	Anesthesia and Positioning 68	
	Port Placement 68	
	Docking 69	
	Steps of Surgery 69	
	Postoperative Care 70	
	Complications and Their Management 70	
12.	Esophagectomy	72
	Arvind Kumar, Belal Bin Asaf	
	Preoperative Preparation and Precautions 72	
	Anesthesia and Positioning 72	
	Port Placement 73	
	Steps of Surgery 73	
	Postoperative Care 73	
12	Vascular Surgery	70
10.	Arvind Kumar, Belal Bin Asaf	76
	Anesthesia and Positioning 76 Status of Robotic Acrtic Surgery 77	
	Status of Robotic Aortic Surgery 77	
ect	tion 4: Gynecology	
14.	Myomectomy	81
	Rooma Sinha, Madhumati S, B Rupa	OI
	Preoperative Assessment and Role of Magnetic Resonance Imaging 82	
	Role of Intrauterine Manipulation 82	

Port Placement, Positioning and Docking 82

	Techniques to Reduce Blood Loss 83 Hysterotomy 84 Enucleation 84 Suturing Techniques 85 Adhesion Prevention 86 Fibroid Retreival 86 Hybrid Technique 86	
15.	Challenges in Robotic Myomectomy Kiranabala Dash, SB Khanna Preoperative Preparation and Precautions 88 Anesthesia and Port Placement 88 Steps of Surgery 89	88
16.	Robotics in Benign Gynecology Mala Srivastava, Ankita Srivastava Surgical Evolution is Nothing New 92 Indications 93 Hysterectomy 93 Myomectomy 94 Tubal Reanastomosis 94 Sacrocolpopexy 95 Endometriosis 96 Vesicovaginal Fistula 97 Cervical Cerclage 98	92
17.	Sentinel Node Mapping in Gynecological Cancers Anupama Rajanbabu Background 101 Technique of Sentinel Lymph Node Mapping using Indocyanine Green 101 Learning Curve 103	101
18.	Robotic Staging Surgery for Endometrial Cancer Anupama Rajanbabu Preoperative Evaluation and Preparation 105 Patient Positioning 105	105
	Uterine Manipulator 106 Port Placement 106 Docking 107 Instrument Placement 108	

	Cautery Settings 108 Surgical Technique 108 Hysterectomy 109 Pelvic Lymphadenectomy 109	
19.	Endometrial Cancer and Cervical Cancer Sabhyata Gupta, Shradha Chaudhari	111
	Pretreatment Evaluation 111	
	Surgical Staging Overview 111	
	Routes of Surgery 111	
	Comparison of Robotic Route with Other Routes 113	
	Robotic Surgery in Cervical Cancers 114	
	Robot-assisted Radical Hysterectomy 114	
	Comparison of Robotic Route to Laparoscopy and Open Route 115	
20.	Ovarian Cystectomy	117
	Neelam Suri	
	Preoperative Evaluation 117	
	Surgical Approach 118	
	Specific Considerations 119	
Sect	Suturing in Ovarian Surgery 123 tion 5: Urogynecology	
21.	Vesicovaginal Fistula Repair	127
	Nitesh Jain, K Ramesh	
	History and Physical Examination 127	
	Investigations 127	
	Repair of Vesicovaginal Fistula 127	
	Tips and Tricks 129	
	Såt notsecorf autrescorf	
Sec	tion 6: Pediatric Urology	
22.	Pediatric Urology: The First Hundred Cases DK Kandpal, SK Chowdhary	133
	Starting the Pediatric Robotic Program 133	
	Pyeloplasty for Pelviureteric Junction Obstruction 134	
	Ureteric Reimplantation for Refluxing/Obstructed/Ectopic Ureters, Retrocaval Ureter 135	
	Partial Nephrectomy/Hemi-nephroureterectomy/Nephroureterectomy for Complex Renal Anomalies 13	36

Collection

xviii

23.	Radical Prostatectomy	141
	Hariharan Palayapalayam Ganapathi, Kenneth J Palmer, Gabriel Ogaya-Pines, Travis Rogers, Vipul R Patel	T4T
	Preoperative Preparation 141	
24.	Role of Pelvic Lymphadenectomy in Robot-assisted Radical Prostatectomy	148
	Varun Mittal, NP Gupta	
	Lymphatic Drainage of Prostate 148	
	Imaging for Lymph Node Involvement 148	
	Indications of Pelvic Lymphadenectomy 150	
	Extent of Pelvic Lymphadenectomy 151	
	Survival Benefit with Pelvic Lymphadenectomy 152	
	Complications Associated with Pelvic Lymphadenectomy 152	
	Robot-assisted Pelvic Lymphadenectomy; Current Status 153	
25.	Radical Cystoprostatectomy	157
	Sudhir Rawal	
	Patient Selection 157	
	Preoperative Preparation 157	
	Robotic Radical Cystectomy 158	
	Postoperative Care 159	
	Technical Tips and Tricks 160	
	Complications 160	
	Evidence 161	
26.	Partial Nephrectomy	162
	Ajit Saxena	
	Patient Selection 162	
	Preoperative Preparation 162	
	Technique 163	
	Robotic Partial Nephrectomy (RPN) 165	
	Postoperative Care 166	
	Technical Tips and Tricks 166	
	Complications 167	
	Evidence 168	
27.	Donor Nephrectomy	169
	Vinay Mahendra, Jaydip Bhadra Roy, Tridibes Mondal	
	Preoperative Investigations 169	
	Surgical Steps 169	

28.	Adrenalectomy Sohrab Arora, Gagan Gautam	172
	Patient Selection 172 Work-up and Preoperative Preparation 173 Technique 173 Postoperative Care 177 Technical Tips and Tricks 178 Complications 178 Evidence 178	
29.	Urolithiasis: Expanding the Horizons of Robotic Surgery Siddharth Yadav, Prabhjot Singh, Prem Nath Dogra Robotic Stone Surgery 180 Robotic Renal Stone Surgery 181 Steps of Surgery 183 Robotic Ureterolithotomy 185 Steps of Surgery 186 Postoperative Care 187 Outcomes, Complications and Management 187	180
30.	Pyeloplasty Manu Gupta Diagnosis of Pelvi-ureteric Junction (PUJ) Obstruction 190 Indications for Robot-assisted Surgery 190 Treatment 190 Robot-assisted Pyeloplasty 191 Operation Theater Ergonomics 191 Technique 191 Results 192 Different Surgical Techniques 192 Discussion 193	190
31.	Ureteric Reimplantation Vipin Tyagi Indications 195 Type of Ureteric Reimplantation 195 Preoperative Evaluation and Preparation 195 Operating Room Configuration and Patient Positioning 196 Trocar Placement 196 Psoas Hitch 197 Boari Flap 197 Postoperative Management 197 Complications 197	195