## STANDARD TREATMENT WORKFLOW (STW)

### Appendicitis

Rajdeep Singh¹, Virinder Kumar Bansal², Anurag Mishra³, Monty Khajanchi⁴, Rajiv Sharma⁵, Sanjay Gupta⁶, Sukumar Maiti⁷

¹Maulana Azad Medical College, New Delhi; ²All India Institute of Medical Sciences, New Delhi; ³Maulana Azad Medical College, New Delhi; ⁴King Edward Memorial Hospital, Mumbai; ⁵Government Medical College and Hospital, Chandigarh; ⁶Government Medical College and Hospital, Chandigarh; ⁷Medical College and Hospital, Kolkata

### CORRESPONDING AUTHOR
Rajdeep Singh, Department of General Surgery, Maulana Azad Medical College, New Delhi
Email: rajdeep.mamc@gmail.com

### CITATION

DOI: [https://doi.org/10.56450/JEFI.2024.v2i1Suppl.059](https://doi.org/10.56450/JEFI.2024.v2i1Suppl.059)

This work is licensed under a Creative Commons Attribution 4.0 International License.

©The Author(s). 2024 Open Access

### DISCLAIMER
This article/STW, was originally published by Indian Council of Medical Research (ICMR) under Standard Treatment Workflow. The reprinting of this article in Journal of the Epidemiology Foundation of India (JEFI) is done with the permission of ICMR. The content of this article is presented as it was published, with no modifications or alterations. The views and opinions expressed in the article are those of the authors and do not necessarily reflect the official policy or position of JEFI or its editorial board. This initiative of JEFI to reprint STW is to disseminate these workflows among Health Care Professionals for wider adoption and guiding path for Patient Care.

### SYMPTOMS OF ACUTE APPENDICITIS

1. **Pain**
   a. Periumbilical or epigastric colic (in nonobstructive type the pain may start at RIF)
   b. Shifting of pain from periumbilical region or begins from this site
2. **Nausea/vomiting**
3. **Pyrexia** (usually absent in first 6 hours)
4. **Loss of appetite**
5. **N.B.**
   a. Pain always precedes vomiting (Murphy). Onset of symptom is more acute and abrupt in acute obstructive appendicitis
   b. If the patient has rigor and high fever within 24hrs of the onset of pain, appendicitis is most unlikely

### SIGNS OF ACUTE APPENDICITIS

1. **Pointing sign** – The patient points with the index finger the site of maximum pain at region of Mc Burney’s point
2. **Cough test** – C/O pain at right iliac fossa on coughing
3. **Tenderness at Mc Burney’s point**
4. **Muscle guard at right iliac fossa (RIF)**
5. **Serving’s sign** – pain at RIF with sudden thrust of palpation at left flank of abdomen
6. **Rebound tenderness – pain at RIF with sudden withdrawal of the maintained pressure with hand**
7. **Generalised rigidity** is a sign of generalized peritonitis; it is less marked if obese, emaciated, extremes of age
8. **N.B.**
   a. When appendix is retrocaecal the signs of appendicitis may be masked
   b. Inflamed pelvic type of appendix in contact with urinary bladder or rectum may produce features of cystitis or tenesmus
   c. Post ileal appendix may cause diarrhoea and marked retching
   d. With progress of pregnancy, appendicular pain may be up at right flank of abdomen as the caecum and appendix are pushed up
   e. Females with inflammatory pelvic organ disease e.g. salpingitis may have history of dysmenorrhoea and purulent vaginal discharge

### ICD-10-K35

**APPENDICITIS**

**ACUTE APPENDICITIS**

(Examination performed within 72 hours)
Singh R, et al.: Appendicitis

**Standard Treatment Workflow (STW)**

**APPENDICITIS**

**ICD-10-K35**

**SYMPTOMS OF ACUTE APPENDICITIS**
1. Pain
   - Right lower quadrant pain
   - May radiate to the back
2. Nausea and vomiting
3. Anorexia
4. Fever
5. Abdominal distention

**SIGNS OF APPENDICITIS**
1. Right lower quadrant tenderness
2. Right lower quadrant guarding
3. Rovsing’s sign
4. rebound tenderness
5. Pus in the peritoneal cavity

**FACTORS FOR PREPONDERANCE OF APPENDICITIS**
1. History of appendicitis
2. Previous abdominal surgery
3. Recent abdominal trauma
4. Recent onset of pain
5. Unexplained fever

**INVESTIGATIONS**
1. Complete blood count
2. Urine analysis
3. Abdominal ultrasound
4. CT scan of abdomen
5. Laboratory tests for infection

**TREATMENT**
1. Non-operative management
2. Operative management

**APPENDICECTOMY**
1. Conventional open surgery
2. Laparoscopic appendectomy

**CHECKLIST FOR AN UNWELL PATIENT (HAVING FEVER, ANOREXIA ET AL.) FOLLOWING APPENDICECTOMY**
1. Monitor vital signs
2. Assess for pain
3. Monitor bowel function
4. Check incision

**APPENDICULAR MASS**
- In the absence of appendicular mass, surgery may be performed if there is no concern for a perforation.

**OCHSNER-SHERRER CONSERVATIVE TREATMENT**
- Observation
- Monitoring
- Antibiotics

**SIGNS OF IMPROVEMENT IN APPENDICULAR MASS**
- Reduced pain
- Improved appetite
- No fever

**CRITERIA FOR STOPPING THE CONSERVATIVE TREATMENT**
- Resolution of symptoms
- Negative imaging studies

**RECURRENT APPENDICITIS**
- Diagnosis is mainly clinical.
- A history of recurrent appendicitis is present and recent appendectomy is performed if indicated.

**KEEP A HIGH THRESHOLD FOR INVASIVE PROCEDURES**

This STW has been prepared by the Ministry of Health and Family Welfare, Government of India, in collaboration with JEFI. It is intended to provide an evidence-based approach to the management of acute appendicitis. It is important to consider the individual patient’s circumstances and to seek expert advice when dealing with this condition.