

# Surgical Pathologies of the Right Iliac Fossa: Anatomico-Clinical Aspects and Management in the General Surgery Department, Conakry Hospital

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## ABSTRACT

**Introduction:** The aim of this study was to report our experience in the management of surgical pathologies of the right iliac fossa at the Ignace Deen CHU national hospital in Conakry.

**Methodology:** This was a prospective descriptive study lasting 6 months from October 01, 2018 to March 30, 2019 in the general surgery department of the Ignace Deen National Hospital

**Result:** During our study, 919 surgical pathologies were admitted to the department, FID pathologies represented 373 cases or 40.59%. We noted a female predominance in 67% (250 cases); the sex ratio was 0.4. The 10-20 year age group was the most represented with 146 cases, or 39.14%. The average age of our patients was 38 years with extremes of 2 years and 82 years. Pupils/students were the most represented socio-professional layer with 183 cases (49.06). Abdominal pain, nausea and/or vomiting, stopping the transit of materials and gases were the most common functional signs). Abdominal ultrasound was the most contributing imaging test with 71 cases (19.03%). Acute appendicitis with 268 cases was the most frequent digestive pathology, ectopic pregnancy with 12 cases the most represented gynecological pathology and 02 cases of right ureteral lithiasis due to urological pathologies. Mac Burney's incision with 254 cases, or 68.09%, was the most performed first voice. The operative consequences were simple in 365 cases 97, 85.

**Conclusion:** Surgical pathologies of the right iliac fossa remain dominated by acute appendicitis, although gynecological pathologies such as ruptured ectopic pregnancy and urological pathologies such as right ureteral lithiasis are not negligible.

**Keywords:** Right iliac fossa pathologies; Acute appendicitis; Ectopic pregnancy; General surgery Ignace Deen

## INTRODUCTION

The right iliac fossa is an anatomoclinical entity corresponding to the lower right quadrant of the abdomen which can be the site of a multitude of digestive, urological and gynecological ailments sometimes requiring multidisciplinary management. Among these pathologies, acute appendicitis represents the first digestive surgical emergency in daily practice and appendectomy remains

among the most frequently performed emergency surgeries in the world [1]. Appendicitis is often difficult to differentiate clinically from gynecological conditions, which are often the cause of pain in the right iliac fossa. The exact frequency of the aetiologies of pain in the right iliac fossa in women in our regions is difficult to estimate, due to the impossibility of carrying out a homogeneous consecutive series, the patients being able to

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consult their attending physician, a general emergency service. Or a department of gynecology [2]. The absence of anatomy-clinical parallelism and the serious evolutionary possibility of acute appendicitis have led for decades to surgery with in return unnecessary interventions [3]. Functional ovarian cysts (luteinic or follicular) are frequently the cause of pain in the right iliac fossa in women. The demonstration of cystic intra-ovarian fluid images, hemorrhagic or not, sometimes bordered by hypervascularization in the crown of the peripheral ovarian parenchyma, offers a possible etiology for the painful symptomatology, in the absence of any other associated pathology [2]. Nephretic colic with 120,000 to 150,000 episodes each year in France represents 1 to 2% of emergency room consultations [4]. Pain in the right iliac fossa is the most frequent reason for hospitalization in a digestive surgery department: 250,000 new cases of acute appendicitis per year in the United States are responsible for one million days of hospitalization. As many patients are hospitalized for the same reason, but carrying another pathology that does not necessarily require a surgical sanction [5]. The aim of this study was to report our experience in the management surgical pathologies of the right iliac fossa at the Ignace Deen CHU national hospital in Conakry.

## METHODOLOGY

This was a prospective study of a descriptive type lasting 6 months from 01 October 2018 to 30 March 2019-

Were included in our study, all the patients admitted and operated on for one or more pathologies of the right iliac fossa regardless of the source and who agreed to participate in the study with informed consent.

Were included in our study, all patients admitted and operated for a non-traumatic abdominal surgical emergency and having performed at least one imaging examination with informed consent. During the study period, patients lost to follow-up were excluded. The parameters studied were: hospital frequency, age, sex, profession, origin, marital status, mode of admission, consultation time, reasons for consultation, functional signs, physical signs, history, imaging and biology examinations performed, etiologies, type of treatment, post-operative treatment and length of hospitalization.

## RESULTS

During our study, 919 surgical pathologies were admitted to the department, FID pathologies represented 373 cases or 40.59%. Both sexes were concerned with a female predominance in 67% (250 cases); the sex ratio was 0.4. The 10-20 year age group was the most represented with 146 cases, or 39.14%, followed by the 21-30 age group with 101 cases, or 27.08%; in 8 cases our patients were over 70 years old. The average age of our patients was 38 years with extremes of 2 years and 82 years. Pupils/students were the most represented socio-professional layer with 183 cases (49.06%), followed by housewives 76 cases (20.38%), and civil servants with 43 cases (11.53%). Abdominal pain, nausea

and/or vomiting, stopping the transit of materials and gases were the most common functional signs (Table1). Our patients consulted in emergency in 255 cases (Table 3) (68.36%) and in planned consultation in 118 cases (Table 2) (31.64%). Abdominal ultrasound was the most contributing imaging test with 71 cases (19.03%), unprepared abdominal x-ray in 28 cases (7.51%) and CT with 1 case (0 , 26%). Acute appendicitis with 268 cases (Table 4) was the most frequent digestive pathology, ectopic pregnancy with 12 cases the most represented gynecological pathology and 02 cases of right ureteral lithiasis on account of urological pathologies. Mac Burney's incision with 254 cases, or 68.09%, was the most performed first voice. The operative consequences were simple in 365 cases 97.85%. We recorded 07 cases of surgical site infection and noted 01 cases of death (Table 5). The mean length of stay was 1.3 days with extremes of 1 to 30 days.

**Table 1:** Frequency of clinical signs.

Clinical signs	Effective	Percentage
Abdominal pain	368	98.66
Nausea and/or Vomiting	212	,
Stopping of materials and gases	61	16.35
Diarrhea	20	5.36
Amenorrhea	16	4.29
Headache	15	4.02
Metrorrhagia	4	1.07
Fever	180	48.26
Anorexia	71	19.03
Weight loss	62	16.62
Physical asthenia	30	8.04
Mass of IDF	62	16.62
Abdominal defense	32	8.58
Abdominal bloating	25	6.7
Bulging and painful ass	13	3.49
Abdominal tympanism	13	3.49
Dullness	5	1.34
Abdominal contracture	1	0.27

N=373

**Table 2:** Distribution of cases according to the consultation period.

Emergency consultation deadline	Effective	Percentage
≤ 24 h	28	7.5
25-48	41	10.99
49-72	43	11.53
>72 h	143	38.34
Total	255	68.36

MD emergencies: 5 days extreme: 2 and 14 days

**Table 3:** Distribution of cases according to the consultation period.

Consultation period Planned	Effective	Percentage
≤ 1 month	49	13.13
02-Mar	42	11.27
>3	27	7.24
Total	118	31.64

MD planned: 113 days extreme: 30 days to 730 days

**Table 4:** Frequency of IDF pathologies.

Pathologies	Effective	Percentage
<b>Digestive</b>		
Acute appendicitis	268	71
Acute tumor and ileal flange bowel obstruction	33	9
Appendicular peritonitis and ileal perforation	28	8
<b>Gynecological</b>		
Right ectopic pregnancy	12	3
Right ovarian cyst	12	3
Right ovarian tumor	3	1
<b>Parietal</b>		
Right inguinal hernia	15	4
<b>Urological</b>		
Right ureteral lithiasis	2	1
<b>Total</b>	<b>373</b>	<b>100</b>

**Table 5:** Distribution of cases by type of incision.

Incision type	Effective	Percentage
Inguinal	16	4.28
Joel cohen	1	0.26
Mac Burney	254	68.09
Median	16	4.28
Pfanenciel	13	3.59
Sus and sub umbilical	73	19.57

## DISCUSSION

### Frequency of surgical pathologies of the iliac fossa compared to other surgical pathologies

During our study we collected 373 cases of surgical pathologies of the right iliac fossa (40.59%) compared to other surgical pathologies (59.41%), at the general surgery department of the Ignace Deen National Hospital, CHU from Conakry. This rate (40.59%) was close to that reported by Neossi Guena M in Cameroon who reported (44.1%) pain in the right iliac fossa [6]. This could be explained by the fact that infections of the right iliac fossa are a very common cause of emergency visits.

### Sociodemographic profile of patients

**Age and sex:** our study shows that the 10-20 year age group was the most affected (39.14%). The average age was 41 years with the extremes of 2 and 80 years. The sex most concerned was the female sex (67%) with a sex ratio = 0.4. Our results were similar to those of Lee JH who reported that the age groups of 10-14 years in men, and 15-19 years in women were the most affected [7]. The predominance of the young subject in our series would be justified on the one hand by the fact that the Guinean population is predominantly young (65%) and on the other hand by the fact that the pathologies most found in our series were the prerogative of the young subject in particular the woman.

**Distribution of cases according to origin:** In our study, more than half of our patients (88%) lived in urban areas, against (12%) in rural areas. This would be justified by the proximity of the health structure for this social layer. The lack of financial means and the remoteness of the structure would prevent patients living in rural areas from accessing it.

**Distribution of cases according to profession:** In our study we noted a predominance of pupils and students (49.06%).

### Distribution of cases according to clinical signs

Our results were superior to those of Diop [8] who reported in a study on the diagnostic management of non-traumatic acute abdomens that the abdominal pain was suddenly onset and was located in the right iliac fossa in 23.6% of cases, which is correlated with the number of diagnosis of appendicitis evoked after clinical examination at (24.2%), and those of Gbessi [9] Who reported that more than (70%) of patients consulted for abdominal pain including 64 generalized and 58 in right iliac fossa.

### Breakdown of cases according to consultation times

In an emergency situation, our results were close to those of Soumah [10] in Dakar who reported an average time between the onset of symptoms and treatment equal to 4 days; and those of Gbessi [9] who reported a consultation delay which was generally between 3 and 5 days after the onset of symptoms.

### Distribution of cases according to the rate of completion of imaging examinations

Our results were superimposable on those of Neossi who reported in their series that ASP was performed in (46.94%) and ultrasound was performed in (94.28%) of patients. This would be justified by the fact that these two examinations are the most accessible in our context and that the scanner was still considered as an inaccessible examination because of the low socio-economic level of our patients.

### Frequency of surgical pathologies in IDF

**Frequency of surgical pathologies of IDF compared to other digestive pathologies:** Our results were different from those of Magagi IA [11] in Niger who reported that ileal and appendicular

perforations represented (44.05%), followed by occlusions (27.97%) and acute appendicitis (13.34%). Our results were comparable to those of Neossi guena M [6] who reported that out of (44.1%) abdominal pain located at the right iliac fossa, (37.41%) were acute appendicitis.

**Frequency of surgical pathologies of IDF compared to other gynecological pathologies:** Our study corroborates that of Paoletti [2] who reported that ruptured ovarian cysts (53%) came after appendicitis in surgical pathologies of IDF in women.

**Frequency of surgical pathologies compared to other urological pathologies:** Our results were lower than those found by Taourel [12] who reported in 2002 that 3% to 5% of patients with an appendicular picture, pain in the right iliac fossa was due to pyelonephritis or to right ureteral obstruction by a stone, usually located at the uretero-bladder junction right.

#### Distribution of cases according to the first route

Our study found that Mac Burney's incision was used the most. This result could be explained by the strong predominance of acute appendicitis in our study, which occupied the first place among surgical pathologies of the right iliac fossa.

#### Distribution of cases according to the postoperative course

The occurrence of complications in our study could be explained by the nature of the pathology found during the operation and the quality of the treatment. We recorded a single case of postoperative death during our study (0.27%) in an 88-year-old Mr who operated planned for OIA on a cecal tumor. Our results were lower than those of Harouna Y [13] who during a study on appendicitis in Niger recorded (46%) two complications (69 parietal suppurations and 7 stercoral fistulas) with mortality equal to (4%).

#### Distribution of cases by length of hospitalization

Our results were markedly different from those of Harouna [13] who reported an average length of hospitalization equal to 13.4 days with extremes of 3 days and 63 days. This would be justified in our context by the large number of cases of iliac fossa pain, the aetiology of which was acute appendicitis, which benefited from day surgery.

### CONCLUSION

Surgical pathologies of the right iliac fossa remain dominated by acute appendicitis, although gynecological pathologies such as ruptured ectopic pregnancy and urological pathologies such as right ureteral lithiasis are not negligible. During our study, 919 surgical pathologies were admitted to the department, FID pathologies represented 373 cases or 40.59%. Both sexes were concerned with a female predominance in 67% (250 cases); the sex ratio was 0.4.

### CONFLICT OF INTEREST

The authors state that there was no conflict of interest in the performance of this work.

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