

## Original Research Article

## Annual Review of the Surgical Unit at the Fana Reference Health Centre

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**Abstract: Objectives:** To evaluate the surgical activities of the surgical unit of the Fana Health Centre. This was a prospective and descriptive study carried out in the surgical unit of the Fana Health Centre over a period of 12 months (01 July 2020 to 30 June 2021). **Results:** 331 surgical consultations with 242 surgical pathologies operated on, i.e. 73.11%. Men were more affected than women with a sex ratio of 2.9 and a predominance of young adults aged 16-30 years with 28.51%. The main disease groups encountered were the digestive disease class with a rate of 82.23% in first place, followed by diseases of the urinary system with 19.83%. The average length of hospital stay was 5 days. We observed that of the 242 patients operated on, 10 died (6 from septic shock and 4 from pulmonary embolism). **Conclusion:** This work has enabled us to highlight the surgical activities of the surgical unit at the Fana Health Centre, to evaluate its performance and shortcomings.

**Keywords:** Assessment, Surgery, Fana.

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## INTRODUCTION

Surgery is the medical discipline specialising in the treatment of disease and trauma, which involves the manual and instrumental performance of operative procedures on a living body [1]. One way of assessing the quality of surgical care activity is to establish as accurately as possible a record of pathologies based on socio-demographic data and the main pathologies [2].

Indeed, studies have been carried out: In Belgium, a study by Lerut, J. *et al.*, [3] found that groin hernia surgery is the most frequent procedure in adult surgery. In Mali Cisse AB [4] in: Evaluation of surgical activities performed in the surgical department of the reference health centre of the commune I of the district of Bamako from January 2009 to December 2010, studied the main pathologies encountered.

## OBJECTIVES

- To evaluate the surgical activities of the surgical unit at the Fana referral health centre,
- Determine the frequency of different surgical procedures performed,
- Identify the main pathologies encountered and analyse the outcome of surgical management.

## METHODOLOGY

This was a prospective and descriptive study that took place in the surgical unit at the Fana Reference Health Centre from 1 July 2020 to 30 June 2021, a period of one year.

## Inclusion Criteria

All patients seen in consultation and operated on in the surgical unit regardless of the surgical pathology presented.

## Non-Inclusion Criteria

All patients seen in consultation and/or hospitalised but not operated on:

- Patients with a medical condition.
- Patients operated on behalf of another unit.

## Conduct of the Study

It was carried out through regular consultations, emergency consultations and referrals from other health facilities. The diagnosis of surgical pathologies was made on the basis of clinical examination. Complementary examinations were requested in case of suspicion of the diagnosis of the pathology and their accessibility.

## RESULTS

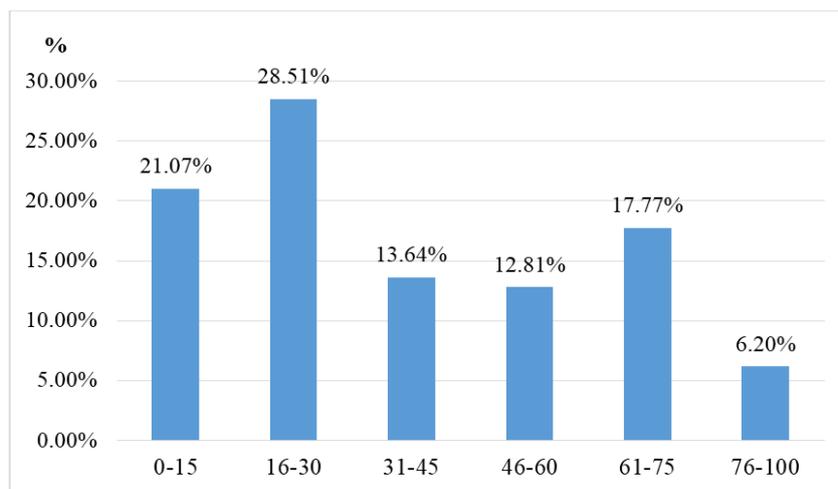
During the period from 01 July 2020 to 30 June 2021, we carried out the following activities at the Fana CSRéf ;

- 331 surgical consultations and

- 242 patients were operated on, representing 73.11% of surgical activity.

### Epidemiological Aspects

#### - Age:

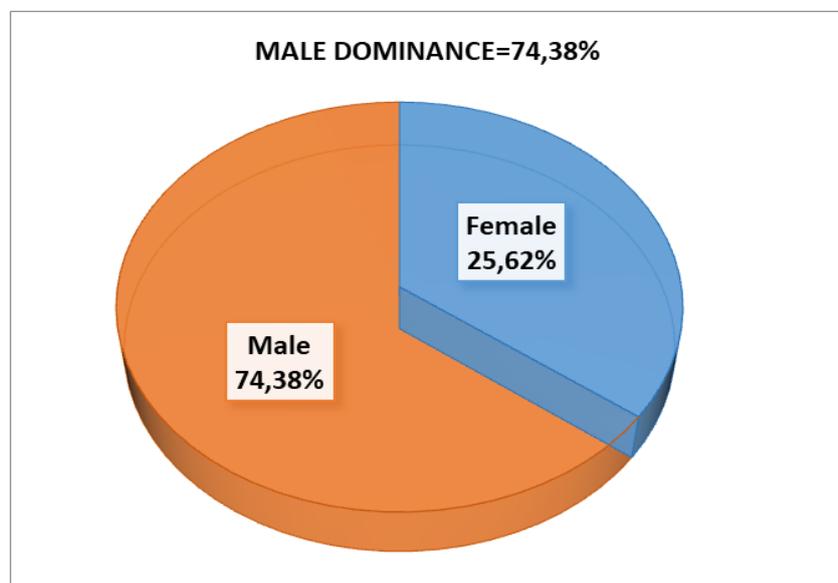


**Figure 1: Distribution of patients operated on according to age group**

The most represented age group was 16-30 years old with 28.51%.

The average age was 37.4 years with extremes of age from 1 year to 95 years.

#### - Sex:



**Figure 2: Distribution of patients operated on according to gender**

Males were predominantly represented at 74.38% with a sex ratio of 2.9.

### 1. Surgical Activity Data:

#### - Mode of Recruitment:

**Table I: Distribution of patients operated on according to the mode of recruitment**

Recruitment method	Workforce	Percentage
Ordinary consultation	107	44,21
Emergency	135	55,79
<b>Total</b>	<b>242</b>	<b>100</b>

The majority of our patients were received in emergency with 135 cases or 55.79%.

**- Reason for Consultation**

**Table II: Breakdown by reason for consultation**

Reason for consultation	Workforce	Percentage
Abdominal pain	114	47,11
Inguino-scrotal swelling	64	26,45
RAU	22	9,1
Umbilical swelling/sus umbilical	13	5,37
Chest pain	6	2,48
Foot pain	6	2,48
Anal pain	5	2,06
Dysuria	5	2,06
Mass in the left hypochondrium	4	1,65
Pollakiuria	2	0,82
Hematuria	1	0,41
<b>Total</b>	<b>242</b>	<b>100</b>

The reason for consultation was dominated by abdominal pain (47.11%).

**Table III: Distribution of patients operated on according to diagnosis**

Intra-operational diagnosis	Workforce	Percentage
Wall hernias	62	25,61
Appendicitis	45	18,59
Adenoma of the prostate	30	12,39
Peritonitis	30	12,39
Acute bowel obstructions	19	7,85
Hydrocele	10	4,13
Traumatic hemoperitoneum	6	2,47
Necrotizing Fasciitis of the foot	6	2,47
Ruptured EP	5	2,06
Tumour of the right testicle	5	2,06
Hemorrhoid IV	5	2,06
Abscess of the right breast	4	1,65
Splenomegaly stage V	4	1,65
Traumatic evisceration	3	1,23
Uterine prolapse IV	3	1,23
Purulent pleurisy	2	0,82
Right pleonephritis	1	0,41
Bladder stones	1	0,41
Cyst of the right ovary	1	0,41
<b>Total :</b>	<b>242</b>	<b>100</b>

Wall hernia was the most common pathology, representing 25.61%.

**- The Main Pathologies:**

**Table IV: Distribution of patients according to the main pathologies encountered**

Intra-operational diagnosis	Workforce	Percentage
Wall hernias	62	25,62
Appendicitis	45	18,59
Adenoma of the prostate	30	12,39
Peritonitis	30	12,39
Acute bowel obstructions	19	7,86
Other	56	23,15
<b>Total:</b>	<b>242</b>	<b>100</b>

The main pathologies were wall hernias with 25.62%.

**- Immediate Postoperative Care:****Table V: Distribution of patients according to the immediate postoperative period**

Post-operations	Suppuration %.	Fistula %.	Scrotal haematoma	DCD %	Simple %.	Total % of total
Appendicitis N=45	0 0,00	0 0,00	0 0,00	1 2,22	44 97,78	45 100
Occlusion N=19	3 15,78	2 10,52	0 0,00	3 15,78	11 57,89	19 100
Peritonitis N=30	5 16,67	1 3,33	0 0,00	3 10,00	21 70,00	30 100
Wall hernias N=62	2 3,22	0 00,00	2 3,22	1 1,61	57 91,93	62 100
Adenoma of the prostate N=30	3 10,00	2 6,67	0 0,00	2 6,67	23 76,67	30 100
Other N=56	0 0,00	0 00,00	1 1,80	1 1,80	54 96,43	56 100
<b>Total</b>	<b>13</b> <b>5,4</b>	<b>5</b> <b>2,06</b>	<b>3</b> <b>1,24</b>	<b>11</b> <b>4,50</b>	<b>210</b> <b>86,80</b>	<b>242</b> <b>100</b>

Simple postoperative effects accounted for 86.80% and we recorded 11 deaths (4.54%).

**DISCUSSION****1. Epidemiological Aspects:****• Time of Year**

The majority of our patients were operated on during the months of October and January with 26 cases or 10.74% each.

Our results are similar to those of Cissé. AB in 2011 [4] who recorded the maximum number of his patients in the month of February, i.e. 14.8%.

This time of year corresponds to the end of the harvest and therefore to a greater influx of rural populations to the surgical services.

**1-2- Age**

Our study shows that surgical pathologies can be seen at any age.

The most represented age group was 16-30 years old, 28.51%.

The average age was 37.4 years with extremes of age ranging from 1 year to 95 years. This high frequency could be explained by the fact that the Malian population in general and Fanoise in particular is predominantly young.

In Ouagadougou, Ouiminga R.M *et al.*, In 2003 [5] found that the average age was 31.2 years at the Yalgado Ouedraogo national hospital.

In Bamako in 2005, Dembélé B.M reported an average age of 26 years [6].

Our average age is higher than that of the authors mentioned above.

**1.3- Gender**

We counted 180 men, i.e. 74.38% with a sex ratio of 2.90.

The majority of patients were male, regardless of the type of surgery, apart from the rare gynaecological conditions. This was also found in hospitals by authors [7, 9].

This conformity of results between facilities of different levels would be linked to the fact that women are generally referred to gynaecology services in the said facilities.

Another hypothesis that could explain this imbalance is the importance of hernia pathology, which mainly affects the male sex, and prostate adenoma, which is a strictly male pathology.

**2. Surgical Activity Data:****2.1-- Method of Recruitment**

The majority of our patients were received as emergencies, 135 cases or 55,79 %.

The explanation is none other than the late use of health services by rural populations.

**2.2- Clinical Signs:**

Abdominal pain was the first reason for consultation, i.e. 47.11%. This shows that the surgical abdominal emergency is the most important surgical emergency. Konate, M in 2005 CHU GT [8] on 382 surgical emergencies found 305 abdominal surgical emergencies, i.e. 79.84%.

This pain has been reported in the literature as the most frequent reason for consultation.

Pandonou N. *et al.*, [9] and Konate M. [8] observed 100% pain in their series.

**2.3-. Management:  
- The Main Pathologies Found**

From July 2020 to June 2021 in the Fana health district, the main groups of diseases encountered

were digestive diseases with a rate of 82.23%, followed by diseases of the urinary system with 19.83%.

**- The Pathologies According to the Authors:**

**Table VI: Pathologies according to the authors**

Authors	Coulibaly AB [10]	Karim Ait Jaja [11] Morocco	Our study
Etiologies in descending order	Appendicitis 14 26,92%	Appendicitis 550 43,41%	Wall hernia 62 25,62%
	Strangulated hernia 13 24,99%	Occlusion 70 5,52%	Appendicitis 45 18,6%
	Peritonitis 9 17,31%	Peritonitis 69 5,44%	Peritonitis 30 12,4%
	Occlusion 2 3,85%	Strangulated hernia 24 1,9%	Adenoma of the prostate 30 12,4%

Wall hernia was the most represented in our study, 25.62%.

Hernia pathology accounted for 34.83% of digestive pathologies and 25.62% of all interventions.

This high prevalence of hernia can be explained by the effect of old age and hard work (hernias being due to weakness of the abdominal wall) and is found in several other studies in Mali [4, 12, 13].

Inguinal hernia accounted for 72.58% of hernia pathologies with 26.67% of strangulated hernia.

Out of 198 cases Maïga. AY found 30.3% strangulation in his study at Nianankoro Fomba Hospital in Segou in 2013 on strangulated hernias [14].

Strangulated hernia is the second most common cause of small bowel obstruction [9].

In our study it was the first cause of occlusion, with 40.00% and we did not record any cases of intestinal necrosis.

This could be explained by the good understanding of the population in front of any case of hernia strangulation which is the major complication of hernias.

**- Post-Operative Care**

**Table VII: Mortality by author**

Authors	Frequency	Percentage
Mariko B [15], 2011	9/101(P=0,616983)	8,9
Diabaté S [16] Bougouni, 2014	4/20(p=0,940280)	20,00
Our study, Fana 2017	3/19	15,78

In our study, mortality represented 15.78%. This rate is comparable to that of Diabaté S [16] who found 20.00%.

Morbidity was dominated by parietal suppuration with 26.31% in contrast to Dombia A.A [17] who recorded 25% of digestive fistula.

Several factors can influence the postoperative course: etiologies of the occlusion, associated defects, the advanced age of the patients, the operative technique and the experience of the operator.

**- Length of Stay:**

We observed an average hospital stay of 5 days in 78.93% of our patients. Diakité M. L [13] and Cissé AB [4] reported a similar result in their work,

unlike the work of Diallo M [18] who reported an average duration of 7.9 days.

This could be explained by the hygienic quality of the inpatient unit and the postoperative care.

**CONCLUSION**

This work has enabled us to highlight the surgical activities of the surgical department at the Csref of Fana, to evaluate its performance and shortcomings.

In a sample of 242 patients, the majority were male (74.38%), hernia repair was the most frequent procedure (25.62%) and mortality was 4.54%.

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