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RESEARCH ARTICLE

Management of Adult Abdomino-Pelvic Masses at Brazzaville University Hospital

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Abstract

Objective : To report our experience in the management of adult abdomino-pelvic masses at the Brazzaville University Hospital Centre.

Patients and Method: This was a descriptive cross-sectional study conducted in the digestive surgery department of the Brazzaville University Hospital from 1 January 2020 to 31 December 2023. We included all patients aged at least 18 years treated for a palpable abdomino-pelvic mass.

Results: During the study period, 58 patients were treated for an abdominal or abdominopelvic mass, representing a hospital frequency of 1.7%. The age of our patients ranged from 18 to 90 years, with a median of 48.5 years. There were 41 women and 17 men, giving a sex ratio of 0.41. The main reason for consultation was abdominal enlargement (n = 41, 70.68%) followed by abdominal pain (n = 32, 55.17%). The majority of patients had a WHO perfomens status of 2 (n = 37 or 63.79%). Fifty-six patients underwent abdominal CT scans, the majority of which revealed a tissue mass (n = 39, 70.9%). All patients had undergone surgery. Surgical exploration revealed a retroperitoneal mass (n = 4, 6.89%) and an intraperitoneal mass (n= 54, 93.1%). Several surgical procedures were performed, depending on the location of the mass and whether it had invaded neighbouring organs. The post operative course was mostly straight forward.

Conclusion: Abdominopelvic masses are a significant part of our practice. Surgery is sometimes our only diagnostic and therapeutic option.

Keywords: Abdominopelvic Mass, Surgery, Brazzaville.

1. Introduction

An abdominal mass is the enlargement of an organ or region of the abdomen [1]. It is either reported by the patient or discovered by chance by the patient, or during a systematic clinical examination by the doctor, or secondary to the onset of a symptomatic picture. It requires investigations to determineits nature. In Africa, it is often diagnosed late, at the stage of abdominal bloating in children [2]. There are many causes, depending on age and the organ affected [2]. They may be organomegaly, a large faecal impaction, a tumour, or infected or non-infected collections. Their management and prognos is depend on whether the mass isbenign or malignant. Several clinical cases of abdominopelvic or retroperitoneal masses have been reported in adults [3 - 5]. In Niger, Adama S. reported

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a hospital incidence of 6.7% [1]. In the Congo, a study was carried out in paediatrics on the epidemiology of palpable abdominal masses in children in Brazzaville [2]. No studies have been carried out on this subject in adults. The aim of thisstudyis to report on our experience in the management of abdominopelvic masses in adults at the Brazzaville University Hospital Center and to describe the epidemiological, diagnostic, therapeutic and evolutionary aspects of abdominopelvic masses at the Brazzaville.

2. Patients and Method

This was a descriptive cross-sectional study conducted in the digestive surgery department of the Brazzaville University Hospital from 1 January 2020 to 31 December 2023, i.e. for four years. All patients at least 18 years of agetreated for a palpable abdomino-pelvic mass were included. The variables studiedwere :

socio-demographic (age, sex, profession, origin), diagnostic (WHO performance status, reason for consultation, site of mass, paraclinical work-up, histological type) ;

type of surgery (palliative or curative), procedures, results of anatomo pathological examination;

post-treatment follow-up, death, loss of sight, clinical remission, biological remission, evolution at 6 and 12 months.

Data were collected and analysed using Excel 2016 software.

3. Results

3.1 Epidemiological Aspects

During the studyperiod, 58 patients were treated for an abdominal or abdomino-pelvic mass, representing 1.7% of hospitalised patients. The age of our patients ranged from 18 to 90 years, with a median of 48.5 years. The age group most affected was 60 to 69 years (Figure 1). There were 41 women and 17 men, giving a sex ratio of 0.41.

Seven patients were civil servants, 9 patients worked in the private sector and 42 patients had no occupation. Most of the patients had been referred to us by health facilities (41 cases). 17 patients were referred from their own homes.

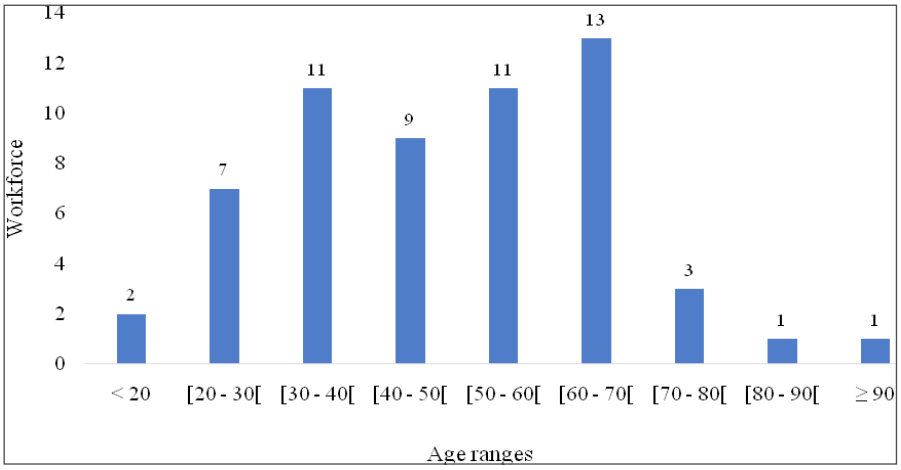

Figure 1. *Patient age distribution*

3.2 Clinical Aspects

The reasons for consultation were as follows: cessation of matter and gas (n = 8 or 13.79%), haematemesis or melena (n = 5 or 8.62%), abdominal pain (n = 32 or 55.17%), increased abdominal volume (n = 41 or 70.68%).

The patients had a WHO perfomance status of 2 (n = 37 or 63.79%), 1 (n = 19 or 32.75%) and 3 (n = 2 or 3.45%). Physical examination revealed an abdomino-pelvic mass (31 cases), a subumbilical mass (20 cases) and a supraumbilical mass (7 cases) (Figure 2).

Figure 2. *Large, overdistended abdomen*

3.3 Paraclinical Aspects

All patients hadundergone abdominal and/or pelvicultra sound, which showed an abdominal mass in all cases.

Fifty-six patients underwent abdominal CT scans, which revealed a tissue mass (n = 39 or 70.9%), a fluid mass (n = 11 or 20%) and a mass with a dual component, tissue and fluid (n = 8 or 14.55%) (Figure 3).

Upper gastrointestinal endoscopy was performed in seven patients, with gastrictumours found in two. It was normal with a mass effect in five patients. Lower gastrointestinal endoscopy was performed in six out of nine patients.

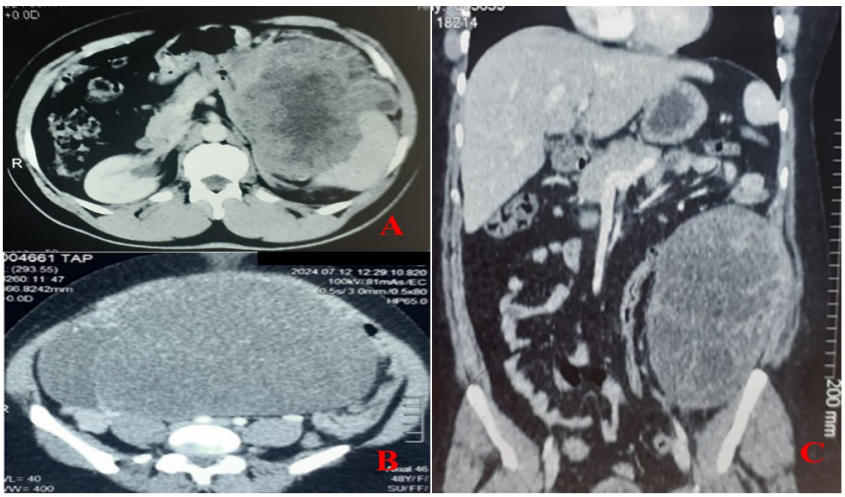

Figure 3. *CT images showingintraperitonealmasses in axial section tissue and gastricfluidin intimate contact with the spleen without a separation line (A) and cystic(B); retroperitoneal tissue mass in coronal section (C).*

3.4 Therapeutic Aspects

All patients underwentsurgery. The approachwas a median laparotomy. Surgical exploration (Figure 4) revealed a :

- retroperitoneal (n = 4, 6.89%): iliopsoas muscle (n = 3) and extrarenal mass (n = 1);
- intraperitoneal (n = 54 or 93.1%):gastric (n = 18), mesentery (n = 1), ovarian (n = 21), uterine (n = 1), post eriorc avity of the epiploons (n = 1), colon (n = 8) and splenic (n = 4).

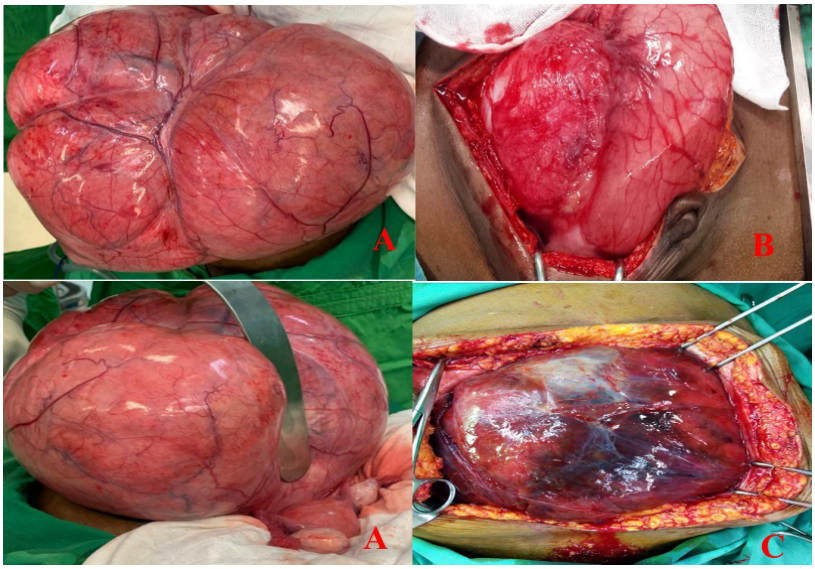

Figure 4. *Intraoperative images showing a cystic mass in the ovary(A), retrogastriccystic mass (B), intraperitoneal tissue mass (C).*

The surgical procedures performed depended on the location of the tumour and locoregional invasion (Figure 4).

Table I shows the distribution of patients by surgical procedure.

Table I. *Distribution of patients by surgicalprocedure*

Organs / spaces	Gestures	Workforce
	Intraperitoneal	
Stomach	Atypicalgastrectomy	15
	Atypicalspleno-gastrectomy	01
	Atypicalspleno-gastrectomywithleftpancreatectomy	01
	Antrectomywithgastrojejunalanastomosis	03
Mesentery	Right ileo-colectomy	01
Ovaries	Bilateraladnexectomycombinedwith total hysterectomywithomentectomy and appendectomy	09
	Unilateraladnexectomywithomentectomy and appendectomy	12
Epiploon back cavity	Gastrocystic bypass	01
Colon	Leftcolectomy	03
	Right colectomy	04
Rate	Splenectomy	04
	Retroperitoneal	
Space	Removal of the mass	01
Psoas muscle	Removal of the mass leaving a tumourresidue on the ureter	01
	Removal of the mass leaving a tumorresidue on the spine	02
Total		**58**

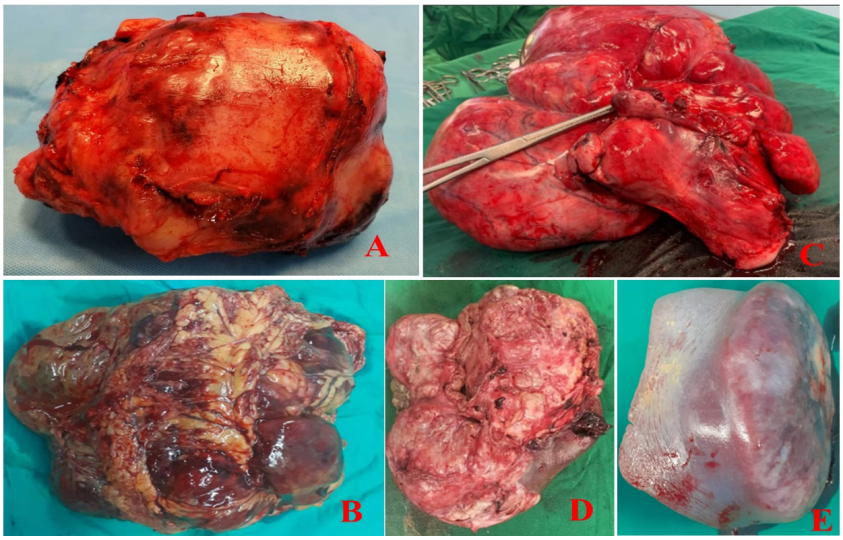

Figure 4. *images showingsurgicalspecimens: removal of retroperitoneal masses(A) and intraperitoneal(B) ; total non-conservative hysterectomyremoving the mass (C); atypicalspleno-gastrectomyremoving the mass (D); splenectomy(E).*

3.5 Evolutionary Aspects

Table II shows the distribution of patients by evolutionary aspect.

Table 2. *Distribution of patients according to evolutionary aspects*

Evolution		Type of complications	Workforce	Percentage
Favorable			37	
Unfavorable	< 6 months	Post-operativebleeding	09	
		Fistula	02	
		Anemia	11	
		Infection	07	
		Deaths	02	
	≥ 6 months	Tumorregrowth	05	
		Deaths	04	
Lostfromsight			03	

3.6 Anatomopathological A spects

The anatomopatho logical findings of the surgical specimens were varied:gastric stromal tumour (11 cases), gastricad enocarcinoma (1 case), desmoidtumour of the mesentery (1 case), benignteratoma of the ovary (4 as), serouscystadenoma of the ovary (11 cases), pseudocyst of the pancreas (1 case), colonicadenocarcinoma (4 cases), lymphoma of the spleen (4 cases), retroperitonealsarcoma (1 case), paraganglioma (1 case)

4. Discussion

Abdominal masses are a frequentreason for surgical consultations. We report a hospital frequency of 1.7% during the study period. Our results are lower than those of Saidou Adama in Niger [1], who found frequencies of 6.7% respectively.

The predominance of women reported in our work is consistent with the results of Saidou Adama [1] in Niger, Akkoca M. [6] in Turkey and Mahamoud G. [7] in Morocco. The medianage of our patients was 48.5 years, ranging from 18 to 90 years. The age group mostaffectedwas 60 to 69. This is slightlyhig her than that of Saidou Adama, whofound 41.8 ± 14.2 years with extremes from 10 to 69 years. This difference may be explained by the fact that the Nigeri an study also included adolescents. In addition, several clinical cases of abdominopelvic masses have been reported in the literature in patients aged between 29 and 69 years [3 - 5]. Several paediatric studies have also been reported in the literature [8 - 10].

Abdominal pain was the main symptom (84.9%) reported by Saidou Adama in Niger, whereas in our study it ranked second (32 cases) after enlargement of the abdomen (41 cases). Akkoca M and Mahamoud G found proportions of 61% and 57.5% respectively [6, 7].

The mass was palpable in all our patients, whereas in Niger itwas palpable in 75.5% of cases, even though 17% of patients were obese. Akkoca M. [6], in a series of 43 cases in Turkeyin 2017, found abdominal masses on physical examinationin 62.2% of cases. This difference in frequency could be due to the fact that our study focused only on palpable masses.

CT is a re ference examination, but its sensitivity is limited by organ site, particularly at the pelvic [11] and retroperitoneal [12, 13] levels. CT was performed in 56 patients in our series, and contributed to the aetiological diagnosisin 32 patients (58.18%). Never the less, it was used to assess the extent of the disease. In Niger, it was performed in 52.8% of cases and contributed to the aetiological diagnosis in 89.29% of cases. Our results are inferior to those found by Akkoca M. [6], in Turkeyin 2017, who reported 62.2%. MRI remains the reference examination for pelvic and retroperitoneal masses in order to determine the origin of the mass and its locoregional extension [14, 15].

The choice of treatment depends on the histological type, the extent of the mass and the patient'sage [16]. For our patients, two ther apeutic methods were used: surgery and chemotherapy, radiotherapy not yetbeing available in the Congo. Surgery was the main the rapeutic option (100%). The approach was a median laparotomy above and/or below the umbilicus, depending on the location of the mass. No laparoscopic approach was used in our patients. Several surgical procedures were performed depending on the location of the mass and the organs involved. We report one case of partial spleno-gastrectomy with left pancreatectomy, and several cases of total non-conservative hysterectomy with total omentectomy and appendectomy.

In ourseries, the majority of patients had a favourable outcome. However, 11 patients (18.96%) developed complications in the 6 months following surgery. All patients who died had malignant tumours. Most of these patients had under gone surgery at an advanced stage of their disease. Our results are better than those of Akkoca M, who reported a mortality rate of 4.4%.

Several histological types were reported in ourseries. All patients with borderline and malignanttum ours were referred to oncology for further management.

5. Conclusion

Abdominopelvic masses are a significant finding in our practice. Imaging plays an important role in the investigation and etiological orientation. In the majority of cases, imaging has enable dpreoperative diagnosis. Surgery is some time souronly diagnostic and the rapeutic option. The majority of cases appear to have a favourable outcome; however, mortality is linked not to diagnostic and/or ther apeutic failure but to the malignant nature, extent of the disease and size of the mass.

Conflicts of Interest

The authorsdeclare no conflicts of interest.

Authors' Contributions

All the authors played an active part in drafting and editing the article. They have read and approved the final version of the manuscript.

6. References

1. Saïdou Adama, Mohamed Lamine AbaniAichatouBalaraba, ZabeirouOudou Aliou, Bako Inoussa Daouda, Ide Kadi, Younssa Hama, James Didier Lassey, Sani Rachid.Diagnostic and the rapeutic approach to abdominal masses in a country with limited resources. BMC Surgery 2024, 24 : 97
2. Okoko AR., Ekouya Bowassa G, Oko APG, Mbika-Cardorelle A, Moyen GM. Epidemiology of palpable abdominal masses in children in Brazzaville. Archives de Pédiatrie 2012, 19(8): 878-879.
3. Sanogo M, Sib SR, Ouédraogo, Ouédraogo I, Sanogo K, Sawadogo I, Zamané H, Bonané B. A case of voluminous Mucinous Cystadenoma of the ovary at the Centre Hospitalier Universitaire Régional De Ouahigouya (Burkina Faso). Med Trop Sante Int. 2022 Jun 20 ;2(2) : mtsi.v2i2.2022.187.
4. Nisrine Mamouni et al. Rare tumors of the ovary: about a series of 11 cases of malignant non-epithelialtumors of the ovary. Pan African Medical Journal. 2015 ;20 :174.
5. Elé N, Datsé Y, Okiémi G, Note-Madzele M, Koutoupot B, Massengo R. leiomyosarcoma Retroperitoneal: about an observation. Bull Méd Owendo. 2007; 11 (29): 54-57
6. 5.Akkoca M, Tokgoz S, Yilmaz BK, Akinci M et al. Diagnostic and therapeuticapproaches to intra-abdominal masses in adults. University Council of Ankara FakultesiMesmuasi, Turkey2017; 70 (3). 10.1501/Tipfak_0000000987.
7. 6.Mahamoud G, Afifi R, Essaid A, et al. Guide dultra sound biopsypuncture in the diagnosis of abdominal mass about 523 cases. J AfrHepato Gastroenterol. 2010 ;4 :220-224.
8. Nicholas M, Potisek, James W. Abdominal masses. AntoonPediatrRev. 2017 ;38(2) :10-103.
9. Savadogo H, Kaboret S, Saga Ouermi A, Kaboré A, and Diarra Y. Palpable abdominal masses in children at the Centre Hospitalier Universitaire Pédiatrique Charles-de- Gaulle de Ouagadougou (Burkina Faso). Revue Africaine Des Sciences Sociales Et De La Santé Publique 2022, 4(2): 81-89.
10. Mallebranche C, Irtan.S. Abdominal mass in children. Perfect ionnement en Pédiatrie 2023, 6(2) : S34-S37,
11. Jacquet P, Jelinek JS, Steves MA, Sugarbaker PH. Evaluation of computed tomography in patients with per itoneal carcinosis. Cancer. 1993 ;72(5) :1631-6
12. Rajiah Prabhakar; Sinha Rakesh; Cuevas Carlos; Dubinsky Theodore J.; Bush William H.; Koloky thasOrpheus . Imaging of Uncommon Retroperitoneal Masses. RadioGraphics 2011, 31(4): 949-976.
13. Mota Micaela Maciel dos Santos;Bezerra Regis OtavianoFrança; Garcia Marcio Ricardo Taveira (2018). Practicalapproach to primaryretroperitoneal masses in adults. Radio logia Brasileira, 51(6), 391-400.
14. Shanbhogue Alampady K;FasihNajla; Macdonald David B; Sheikh Adnan M; Menias Christine O; Prasad Srinivasa R. Uncommon Primary PelvicRetroperitoneal Masses in Adults: A Pattern-based Imaging Approach. Radio Graphics 2012, 32(3): 795-817
15. Acko-ohui Estelle ; Gui-bile lynda ; Kouao Jean-Paul ; Kouadio Kouamé Eric ; KabasRaissa ; Dede N'Dri Simon ; Diabate Sidiki ; Yapo Paulette. MRI features of pelvic masses in a tropical area. Journal Africain d'Imagerie Médicale 2021; 13(1) :25-30.
16. Hassan M, Afifi G, Bousseaden R, Essamri W, Benelbarhdadi I, Adjana FZ et al. Echoguidedbiopsypuncture in the diagnosis of abdominal masses: about 523 cases. J AfrHepatoGastroenterol. 2010 ; 4 : 2.