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Contribution of Oral Records to the Forensic Identification in Yaounde

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Summary

Introduction: During mass disasters, due to the quantity of bodies destroyed and their rapid decomposition, it is very often difficult to identify individuals. Today, this recognition can be made much easier by using the elements found in the ante-mortem oral file of the victims. This practice, which is increasingly common in the West, is very little used in our country where we have very few studies on the medico-legal value of this document. The purpose of the study was to determine the contribution of the oral file in the medico-legal identification in Yaoundé.

Methods: It was a descriptive and retrospective study conducted over a period of 8 months during 2021, in three hospitals in Yaoundé, namely the University Hospital of Yaoundé (CHUY), the Military Hospital of Yaoundé (HMY) and the Adventist Clinic of Yaoundé. Our research spanned a period of 4 years from January 2017 to December 2020. Our research spanned a period of 4 years from January 2017 to December 2020. Included in our study were any available and usable oral record found in the odontostomatology departments of our health facilities. Data collection was done using a pre-designed sheet. The data recording and analysis was carried out using Excel 2016 and SPSS 25.0 software.

Results: Out of 2761 files registered, 80.2% were archived and 1200 were exploitable. Photographs were missing from our files. The forensic identifiers found were: the patient's personal information in at least 98.25% of the files, the odontogram in 48.75% of the files, the casts in 1.5% of the files, the retro-alveolar x-rays in 8.41% of the files and the panoramic x-rays in 2.08% of the files.

Conclusion: The oral file has a lot of personal, clinical and paraclinical information useful for the identification of victims.

Keywords: **Forensic identification; Oral record; Yaounde**

Introduction

Forensic identification is defined as a discipline that seeks the identity of a corpse by general methods and odontological methods [1]. The oral record is a documentation that records all the information about the general condition and oral management of the patient [2, 3]. It was used after the 2001 World Trade Center bombing where it identified 20% of the victims [1]. In Cameroon, despite the occurrence of disasters such as that of Mbanga pongo in 2007, we have very little information on the content of our oral records (1) and it is with this observation that we proposed to determine the contribution of the oral file in the forensic identification in Yaoundé.

Methodology

A descriptive and retrospective study was conducted from November 2020 to June 2021, for a period of 08 months. Included in

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the study were all oral records recorded over a 4-year period from January 2017 to December 2020; available and exploitable found in the odontostomatology departments of the University Hospital of Yaounde (CHUY), the Military Hospital of Yaounde (HMY) and the Adventist clinic of Yaounde. Sampling was consecutive and extensive. The data collection was done using a technical sheet inspired by the Patient Record in Dentistry published in 2000 by ANAES [2]. It was divided into three themes: patients' personal information, medical content and paraclinical elements. The collected data was then recorded and analyzed using Excel 2016 and IBM SPSS 25.0 software. Results were reported in frequencies, averages and numbers.

Results

Out of 2761 files registered, the proportion of archived files was 80.2%. At the HMY, we observed a staff of 1008 archived files (90.97%), while at the CHU we had 550 files (55.16%), and at the Adventist clinic 656 files (100%) (Table 1).

Table 1: Proportion of records archived by hospital.

Hospital Name	Number of Patients Enrolled	Number of Archived Files	Proportion of Archived Files
CHU*	997	550	55.16%
Adventist clinic	656	656	100%
HMY**	1108	1008	90.97%
Total	2761	2214	80.20%

*CHU=University Hospital Center; **HMY= Military Hospital of Yaounde

Out of 2214 archived files, 1200 files were usable. A total of 639 were male (53.25%) and 555 female (46.25%) for a sex ratio of 1.14. The average age of patients was 36.45 ± 17 years with extremes of 1 and 85 years, The most represented age group was that of 20 to 40 years or 59.4% (Table 2).

Table 2: Socio-demographic representation of the study population.

Variable	CHU*		HMY**		Adventist Clinic		Total	
	N=400	%	N=400	%	N=400	%	N=1200	%
Sex								
Female	197	49	205	51.93	153	38.7	555	46.25
Male	202	50.98	192	48	245	61.25	639	53.25
Not specified	1	0.02	3	0.07	2	0.05	6	0.05
Sex ratio = 1,14								
Age								
0-20 years	98	24.5	95	23.75	93	23.25	282	23.5
20-40 years	244	61	237	59.25	232	58	713	59.4
40-60 years	58	14.4	63	15.75	67	16.75	188	15.6
More than 60 years	4	0.1	5	0.12	8	0.2	17	0.19
Average	36,45+/-17							

*CHU= University Hospital Center; **HMY= Military Hospital of Yaounde

Of the 6 elements of personal identification of patients found, we note the presence of the name in 1199 files or 99%, that of the address in 1170 files or 98.25%, that of age in 1194 files or 99.5%, that of sex 1194 files or 99.5%, the profession is present in 1183 files or 98.5 and finally the telephone number is present in 1192 files or 99.33% (Table 3).

Table 3: Patient Information.

Hospital Name	Name		Address			Age		Sex		Profession		Telephone	
	N	%		N	%	N	%	N	%	N	%	N	%
CHU*	400	100		398	99.5	399	99.75	399	99.75	397	99.25	397	99.25
Adventist Clinic	400	100		388	97	398	99.5	398	99.5	397	99.25	399	99.7
HMY**	399	99.75		393	98.25	397	99.25	397	99.25	389	97.25	396	99
Total	1199	99.9	1170		98.25	1194	99.5	1194	99.5	1183	98.5	1192	99.33

*CHU=University Hospital Center; **HMY=Yaounde Military Hospital

Table 4: Proportion of patient information and X-rays.

Hospital Name	Patients Informations		Panoramic dental X-ray		Retroalveolar X-ray	
	N	current	N	%	N	%
CHU*	6	situation	6	0.5	26	2.16
Adventist Clinic	6	current	6	0.5	22	1.8
HMY**	6	current	13	1,08	53	4.41
Total	18		25	2,08	101	8.41

*CHU=University Hospital Center; **HMY=Yaounde Military Hospital

We noted the presence of panoramic dental radiography in 25 (2.08%) files, that of retroalveolars in 101 (8.41%) files (Table 4).

We noted the presence of odontograms in 585 (48.75%) files, casts in 19 (1.5%) files, while no photographs were found in the files. It appears that the University Hospital is the only one of our study hospitals that does not use odontograms. There was an absence of photographs in all study hospitals (Table 5).

Table 5: Proportion of odontograms, casts and photographs.

Hospital Name	Odontograms		Casts		Photographs
	N	%	N	%	N %
CHU*	0	0	5	1,25	0 0
Adventist Clinic	205	51.25	12	3	0 0
HMY**	380	95	2	0,5	0 0
Total	585	48,75	19	1,5	0 0

*CHU=University Hospital Center; **HMY=Yaounde Military Hospital

Discussion

Proportion of records archived

We obtained a proportion of 80.2% of records archived in our study hospitals. The hospital with the lowest proportion of archiving was the University Hospital of Yaoundé (CHU), which is very different from the study conducted by Waleed in Sudan, which showed that university students kept records better than practitioners in private institutions [4]. This difference could be explained by the fact that the university hospital has been undergoing restructuring for several years, which would cause problems in organising the record-keeping system.

Patient information

Patient personal information included name (99%), address (98.25%), age (99.5%), gender (99.5%), occupation (98.5%) and telephone number (99.33%). These results are similar to those of Krishan, et al. [5] who found that out of 100 oral physicians, all or 100% recorded all the elements of the patients' personal history. This could be because these are essential elements in any consultation, which allow practitioners not only to identify their patient but also to follow them appropriately. This would imply that for any patient who has undergone an oral consultation, it would be possible to find him/her by having access to his/her file [5].

Radiographs

The files studied contained only 126 radiographs divided into 101 (8.41%) retro-alveolar and 25 (2.08%) panoramic. This is lower than the results of the studies conducted in Sudan by Petro, et al. [6] where 29% of the files contained radiographs. This difference could be explained by the fact that the 3 hospitals in our study gave the radiographs to their patients without making a copy, whereas in Sudan only the government hospitals gave their radiographs to the clients [6]. Our results are also lower than those of Rasmusson, et al. [7] in Sweden, who found a proportion of 50% of records with radiographs [7]. This could be explained by the fact that Rasmusson, et al. [7] conducted their study on all identification cases in the Gothenburg Police Department.

Odontograms

78.4% of the records in our study did not contain an odontogram, which is similar to the studies by petro et al where the proportion of records without an odontogram was 80% (4). Another study by Selvajothi, et al. [8] in 2014 in Chennai, India showed that only 12% of dentists maintained records with dental mapping or odontograms; this could be explained by the fact that filling out the odontogram takes a lot of time and in our country where the number of oral physicians is relatively low compared to the national population, some physicians prefer to focus on emergency management and therefore partial filling of the odontogram [8].

Casts

We found only 19 (1.5%) casts of individual patients. This is similar to the study by Krishan, et al. [5] who found that 91% of oral physicians discarded their casts as soon as the treatment was completed, while the remaining 9% kept them until the first follow-up appointment [5]. This could be explained by the fact that the casts are no longer useful to the doctors at the end of the treatment and therefore become cumbersome after the treatment is completed.

Photographs

No photographs were found in any of our hospitals, which is much lower than the findings of Waleed who, in their study in Sudan, found that 8% of oral physicians kept photographs of their patients [4]. This could be explained by the fact that in our hospitals, the photographs taken were given to the patients or kept in the doctor's personal library but not in the medical record.

Conclusion

At the end of our research on the contribution of the oral file to forensic identification, we can conclude that the proportion of oral files archived in our health facilities was high and that they contained retroalveolar and panoramic radiographs, casts and personal identification elements useful for the identification of victims.

Acknowledgment

None.

Conflict of Interest

No conflict of interest.

References

1. Nuzzolese E, Vella G Di, Bari S (2007) Future project concerning Mass Disaster Management: a forensic odontology prospectus. Int Dent J 57: 261-266.
2. Adélaïde Trocherie (2017) Standardization and computerization of dental data: current status and challenges to be met for improved victim identification. Life Sciences [q-bio]. Dumas-01670467, 7-30.
3. Ngenyam HB (2014) General overview of the disaster management framework in Cameroon. Disasters 38: 562-586.
4. Waleed P (2013) The Effective Accuracy of Dental Records in Forensic Dental Identification in Sudan, University of the Western Cape 11-42.
5. Krishan K, Kanchan T, Garg AK (2015) Dental Evidence in Forensic Identification An overview, Methodology and Present Status. Open Dent J 250-256.
6. Petro Waleed, Feras Baba, Salem Alsulami, Bassel Tarakji (2015) Importance of Dental Records in Forensic Dental Identification. Acta Inf Med 23: 49-52.
7. Rasmusson L, Rene N, Dahlbom U Borrman H (1994) Quality evaluation of patient records in Swedish dental care. Swed Dent J 18: 233-241.
8. Selvajothi P, Lavanya C, Joshua E, Rao UK, Ranganathan K (2014) Awareness of forensic odontology among legal professionals, Chennai, India. N Am J Med Sci 6: 553-557.