Profile of surgically treated lesions in toes and fingers, at a dermatology referral service

Perfil das lesões tratadas cirurgicamente em pododáctilos e quirodáctilos em um serviço de referência de dermatologia

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ABSTRACT

Introduction: Lesions in fingers and toes are frequent in the dermatological practice, and diagnosis is feasible in the majority of cases after a thorough anamnesis and physical examination.

Objective: To draw a profile of the most prevalent lesions in toes and fingers that were surgically approached by the dermatologic surgery team, at a dermatologic referral service, as well as to evaluate the classification of these lesions, their distribution among age groups and genders, and the correlation between clinical suspicion and anatomopathological diagnosis.

Methods: A retrospective observational study was performed with 344 patients, and the evaluation of 367 surgical procedures.

Results: The analysis showed that most of the procedures were performed in female adults, with the left hallux being the most affected location in the studied sample. It was also verified that the majority of the procedures were linked to lesions of traumatic nature, with biopsy/excision and canthoplasty/canthotomy being the most accomplished procedures.

Conclusions: The results of the present study contribute to the planning and design of future dermatological care.

Keywords: Ambulatory surgical procedures; Fingers; Toes

RESUMO

Introdução: As lesões em quirodáctilos e pododáctilos são frequentes na prática dermatológica, sendo possível diagnosticar a maioria após anamnese completa e exame físico.

Objetivo: Traçar perfil das lesões mais prevalentes em pododáctilos e quirodáctilos abordadas cirurgicamente pela equipe de cirurgia dermatológica em um serviço de referência em dermatologia, bem como avaliar a classificação dessas lesões, sua distribuição nas faixas etárias, gêneros, locais de acometimento e a correlação entre a suspeita clínica e o diagnóstico anatomopatológico.

Métodos: Estudo epidemiológico observacional retrospectivo transversal incluindo e avaliando 344 pacientes e 367 procedimentos cirúrgicos.

Resultados: A análise demonstrou que a maior parte dos procedimentos foi realizada em adultos, do sexo feminino, sendo o hálux esquerdo a localização mais acometida na amostra estudada. Verificou-se também que a maioria dos procedimentos decorreu de lesões de natureza traumática, sendo a biópsia/exérese de lesões e a cantoplastia/cantotomia os procedimentos mais realizados.

Conclusões: Os resultados deste estudo contribuem para o planejamento e dimensionamento de futuros atendimentos dermatológicos.

Palavras-chave: Dedos; Dedos do pé; Procedimentos cirúrgicos ambulatoriais
INTRODUCTION

Lesions in fingers and toes are common in the dermatologist physician’s routine. Despite their great importance, there is little information about this topic in the dermatological literature.¹ Many of these lesions, in addition to affecting productivity, cause limitations to daily activities.² It was estimated that in 2004, the cost of dermatological diseases was US$ 39.3 billion in the USA,³ with a significant impact not only on the quality of life of those affected, ⁴ but also on health systems spending. Considering that epidemiological information is fundamental for directing health policies, ⁵ this paper is aimed at outlining the profile of the most prevalent lesions in toes and fingers that were treated by the dermatologic surgery team in a dermatology referral service, in addition to evaluating the classification of these lesions, their distribution by age groups, genders and body sites of occurrence, as well as the correlation between the clinical suspicion of lesions and their anatomopathological diagnosis.

MATERIALS AND METHODS

A cross-sectional retrospective observational epidemiological study was performed, in which dermatological surgeries performed on lesions located in chirodactyls and toes were analyzed in a period of 93 months (August 2009 to April 2017), as well as their histological evaluations, and the records of patients who underwent the surgical procedures, surgical records books and pathological anatomy reports, in the dermatology ambulatory of the Complexo Hospitalar Padre Bento de Guarulhos (CH-PBG). Lesions operated by the hospital’s plastic and oncological surgery teams were excluded, while lesions located in chirodactyls and pododactyls operated by the dermatologic surgery team during the period considered and ambulatorially followed up were included. The present study was approved by CHPBG’s Research Ethics Committee (Opinion number: 2,300,429).

The lesions were classified by the authors into: tumoral, traumatic, inflammatory, infectious and others. The first group included tumors of vascular, cystic, fibroepithelial, neural, melanocytic, epithelial, and other origins. Traumatic lesions included nail plate alterations, onychocryptosis and callosities. Inflammatory lesions included ungual psoriasis, annular granuloma and chronic paronychia. In the studied sample, viral warts represented infectious lesions. The lesions resulting from deposition (gouty tophi), genetic alterations (rudimentary and supernumerary fingers) and actinic keratosis, were classified as “other”.

The procedures performed were standardized and grouped into: biopsy of the nail apparatus; canthotomy / canthoplasty; biopsy / lesion exeresis; curettage associated or not to electrocoagulation, and others. Biopsies of the nail apparatus comprised those performed in the nail’s bed, matrix or plate. Canthotomy and canthoplasty included the implementation of Haneke’s techniques, ⁶ Fanti’s surgery, ⁷ matricectomy, ⁸ reduction of the nail folds using the Dubois⁹ or “super U” techniques, ¹⁰ in addition to phenolization of the nail matrix.¹⁰ Exeresis / biopsy corresponded to procedures for complete removal of tumors and / or biopsies of lesions located outside the nail apparatus. Curettage and electrocoagulation were performed for the treatment of viral warts and pyogenic granulomas. The group “Others” consisted of the techniques of prolonged stay suture (mucosal cyst transfixation), oblique exeresis of the proximal nail fold, and osteotomy, used for the treatment of mucinous / myxoid cysts, chronic paronychia and osteochondromas, respectively.

For concordance analysis between preoperative and post-operative diagnoses, two variables were established: “yes” and “no / inconclusive”. The first variable includes the cases in which the preoperative diagnostic hypothesis was confirmed by anatomopathological analysis. The second refers to cases of disagreement between pre- and postoperative diagnoses, to those whose previous hypotheses were not identified in the analyzed records, or those with inconclusive results. The lesions studied were also grouped and classified as benign or malignant.

RESULTS

A total of 454 records of patients followed up by the dermatologic surgery team were analyzed, with 110 exclusions due to discordance of lesion location, incomplete data, missing medical records, or the non-surgical nature of the procedures, such as cryotherapy and infiltration of periungual medication.

A total of 344 patients were included in the study, of which 63.08% were female, and 36.92% were male (Graph 1). The age ranged from 5 to 89 years (mean value = 43.1 years, STD = 19.59 years). Of the patients evaluated, 13.37% were younger than 18 years old at the time of the procedure, 28.49% were between 18 and 39 years old, 35.47% were between 40 and 59 years old, and 22.67% were older than 60 years (Graph 2).

Regarding the location of surgically treated lesions, the study showed that they were more frequent in pododactyls (60.76%) than in chirodactyls (39.24%) (Graph 3), with the most frequently affected being the left hallux (22.07%) and the right hallux (19.89%) (Figure 1).
Regarding the procedures performed, 141 lesions were sent for anatomicopathological study. Taking into account only lesions that were sent for analysis, 55.32% were classified as having tumoral origin (Graph 5).

Evaluating all 367 procedures, it was possible to verify that the majority resulted from lesions of traumatic nature (Graph 6).

Of the lesions of tumoral origin, 92.31% were benign, and 7.69% malignant, the latter corresponding to five squamous cell carcinomas and one melanoma, totaling 6 malignant neoplasms in the sample. Graph 6 shows the proportion of benign lesions (95.74%) and malignant lesions (4.26%), as percentages of the total sent for anatomicopathological analysis.

The concordance between the diagnostic hypothesis and the anatomicopathological report was positive for 29.08% of the sample, with the remaining 70.92% coming out inconclusive or discordant (Graph 7).

**DISCUSSION**

Lesions in toes and fingers can mostly be diagnosed by complete anamnesis and physical examination, and handled adequately by dermatologist physicians with training in dermatologic surgery. Epidemiological information about them is crucial for directing health policies, however they are unfortunately limited when taking into account all dermatological nosologies. In the case of lesions in fingers and toes, the information is even scarcer. In a study carried out by the Brazilian Society of Dermatology in 2006 on the profile of diseases treated in dermatological consultations in Brazil, the main reason for consultation was acne, followed by superficial mycoses, pigmentation disorders and actinic keratosis. A subsequent study carried out in 2011 at a dermatology reference center in the Northern Brazilian State of Amazonas on the frequency of dermatoses, found STDs, allergic dermatoses, unspecified dermatoses, leprosy and acne, seborrhea and the like as the five most diagnosed groups. Both studies evaluated only ambulatory consultations...
without information on the location of the lesions, also not con-
templating non-surgical procedures, which probably was one of
the factors that contributed to the discordance with the find-
ings of the present study, where only lesions located on toes
and fingers were evaluated. A study carried out from 2002 to
2007 in Curitiba, the capital of the Southern Brazilian State of
Paraná, analyzed the surgical procedures performed in a medi-
cal residency service, verifying that the most frequent procedure
was diagnostic biopsy.8 Although this study did not describe the
location of the lesions treated, it was possible to observe the
presence of agreement with the findings of the present study.

Regarding the most frequently affected age group and
gender, the present study is in line with the available literature
regarding ambulatory care, with the majority of patients being
female and young adults.2,3 No studies were found in the liter-
ature describing the frequency and types of surgical procedures
performed in fingers and toes, nor the most frequent nature of
the lesions or correlation between clinical and anatomopatho-
logical diagnosis.

CONCLUSION
Analysis of the results showed that most of the proce-
dures were performed in adult female patients, with the left hal-
lux being the most affected location in the sample studied. Based
on the analysis of the data collected, it was also verified that most
of the procedures resulted from lesions of traumatic nature, with
biopsy / excision of lesions, and canthotomy / canthoplasty be-
ing the most frequently performed procedures, with prevalence
of the benign lesions over malignant ones. The present study
contributes to the planning and design of future dermatological
consultations.
REFERENCES

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