ABSTRACT

Introduction: Peripheral facial paralysis is a relatively common pathology which concerns both the general practitioner and the ENT specialist, the ophthalmologist, the neurologist and the pediatrician. The difficulty in therapeutic management lies in the lack of randomized and controlled studies. The functional and aesthetic after-effects can be the source of psychological suffering. Material and method: This is a retrospective study, carried out within the ENT and CCF department of the Avicenne Military Hospital in Marrakech over a period of 5 years from January 2016 to December 2020. Data collection was carried out from the medical records of 47 patients hospitalized in the department during the study period. The texts were entered using the MICROSOFT OFFICE WORD2007 software and the graphics were entered using the MICROSOFT OFFICE EXCEL 2007 software. Results: The age of our patients varied between 10 to 69 years, with a clear predominance of the age group of 45-60 years and an average age of 42 years, the majority of these patients, i.e. 87% were male. The monthly distribution showed a greater frequency in Winter. As for the antecedents, diabetes is the most common (34% of cases) followed by recurrence of PFP in 17% of cases. Regarding the severity diagnosis, the majority of our patients had stage IV (45% of our PFP). Although the etiologies are multiple, in our study, refrigerated PFs dethroned them with more than 68% of cases, followed by herpetic PFs which were recorded in 11% of cases. As for the pick-up time, it is 55.3% in the first three days, and fortunately so. The bases of therapy were corticosteroid therapy and facial physiotherapy. Regarding the evolution of our patients, 35 cases had a complete recovery, 9 patients had an incomplete recovery including 3 with synkinesias and spasms and 3 cases did not recover. Our results showed that this same good development is correlated with the precocity of treatment. Conclusion: PFPs are certainly often benign, they always require rapid and appropriate treatment. This pathology unfortunately causes functional, aesthetic and undoubtedly psychological after-effects requiring continuous long-term monitoring.

KEYWORDS facial nerve, peripheral paralysis, early diagnosis
progressed greatly with the refinement of electrical tests. Its prognosis depends on the etiologies. These are varied due to the complexity of the anatomy of the facial nerve, but even the most benign causes do not guarantee recovery without after-effects.

Finally, the treatment depends on the cause. It has partly benefited from advances in otological and otoneurological microsurgery [2]. This work will only consider peripheral damage affecting the motor neuron from the nucleus of the brainstem to the muscular effector, therefore ignoring clinically very distinct central damage.

**Material and Methods**

This is a retrospective descriptive study carried out within the ENT and CCF department of the Avicenne military hospital in Marrakech, which spanned five years, from January 2016 to December 2020, and targeted patients hospitalized following PFP. This is how 47 cases were selected for this work.

**Inclusion criteria:** The patients included in our study met the following criteria

- A confirmed diagnosis (Fig. 1);
- Hospitalization in the department for PFP;
- A complete file includes, in addition to the clinical examination carried out by a doctor from the department, audiometry with the study of stapedial reflexes when the tympanogram is favourable;
- Topographic diagnosis which is carried out by studying the stapedius reflexes;
- A follow-up of at least 6 months.

**Exclusion criteria:** Our study excluded the following patients:

- Cases whose files could not be used;
- A date of hospitalization outside the inclusion period described above;
- Central paralysis;
- The absence of topographical diagnosis;
- A follow-up of less than 6 months.

Data collection was carried out considering the global ethical rules relating to respect for confidentiality and protecting patient-specific data. We grouped the information into tables and histograms using Microsoft Excel 2007 software. The text entry was done using Microsoft Office Word 2007 software in order to obtain a synoptic view of the different parameters for all patients included in the study.

**Résultats**

The age of our patients varied between 10 and 69 years, with a clear predominance of the age group of 45-60 years and an average age of 42 years, the majority of these patients, i.e. 87%, were male. The monthly distribution showed a greater frequency in Winter. As for the antecedents, diabetes is the most common (34% of cases) followed by recurrence of PFP in 17% of cases. Regarding the severity diagnosis, the majority of our patients had stage IV (45% of our PFP). Although the etiologies are multiple, in our study, refrigerated PFPs dethroned them in more than 68% of cases, followed by herpetic PFPs recorded in 11% of cases. The treatment time for our patients varied between 1 day to 45 days, with an average delay of 3 days.

The patients could all benefit from corticosteroid therapy and eye care, which constitute the main medical treatments used in managing PFP. Other medical treatments are used depending on the clinical situation and etiologies, such as antivirals, which were administered parenterally to our patients. As for surgical treatment, the 3 cases in our series which went under the knife were:

1. 1st case: the patient had PF following CME. Not improving, after 3 weeks, a mastoidectomy with surgical decompression was performed.
2. 2nd case: The patient presented for tumoral PF. During the surgical excision of the tumour, the facial nerve was sacrificed.
3. 3rd case: the patient had traumatic PF with the sanction of the facial nerve. He benefited from a nerve graft during the surgical procedure.

Complete recovery was observed within the first three months in 35 cases; only nine patients had incomplete recovery, and 3 cases did not recover (Fig. 1). Regarding the evolution according to the time of treatment, the results were much more satisfactory when the patients were treated early, that is to say, in the first 3 days after the onset of paralysis; for example, they are unfavourable when treatment is late (Fig 2, 3).

**Discussion**

FP corresponds to an attack on the FN, which is responsible for emotion and non-verbal communication, the diagnosis of PFP is purely clinical by the sudden appearance of facial asymmetry, often unilateral, and an erasure of the frontal and nasolabial folds, the Souques sign often encountered in severe facial paralysis, without forgetting the classic Charles Bell sign [3]. Our data are consistent with those in the literature since most of the signs mentioned above were also found in our study and all our patients, apart from the Souques sign, which was rarely present (Fig. 4).

The peripheral nature of facial paralysis is based on the following criteria:
1. A balanced reach of the upper and lower territories,

2. An absence of automatic-voluntary dissociation,

3. A normal neurological examination (long tracts and other cranial nerves)

The usefulness of initiating medical treatment for IFP has been the subject of much debate for several years because the evolution of IFP is spontaneously favourable, with more than 70% complete recovery during the first 6 months [4] and more than 80% subtotal recovery (HBCS grade I and II). This recovery rate is also correlated with the severity of the initial damage, going from a recovery rate of 61% in the initial total PF to a rate of 94% in the case of partial damage. In our series, the outcome was significantly more favourable in patients treated early. This is consistent with data from the literature, such as the Boudjenah et al. study, which found that the guarantee of a favourable outcome is dependent on the quality and speed of implementation of the treatment [5]. Indeed, the publication by Monini et al. also confirms this. They observed that the earlier medical treatment is introduced, the more effective it is, especially in young patients with less advanced House Brackmann stage [6]. Also, Finsterer found in his study in 2008 that the outcome was better if the treatment was introduced in the first 3 days after the appearance of symptoms [7]. Liriano et al. said in their study that treatment with prednisolone within 48 hours of the onset of the disease leads to complete and significantly higher recovery rates and even less synkinesia than prednisolone [8]. Thus, we emphasize that we must always insist on the early initiation of treatment by following a well-codified protocol.

Conclusion
Peripheral facial paralysis is, above all, a functional emergency very frequently encountered in ENT consultations. Despite its benign nature, it generates a very significant social handicap. Several causes are incriminated. However, our work confirms that idiopathic PFP still remains the most common form, but it is a diagnosis of exclusion. Although there is a good chance of spontaneous recovery, treatment should be started once the patient presents. The treatment must be well codified, multidisciplinary and adapted to the new recommendations of learned societies. Early treatment is closely correlated with a better probability of restoring the functional continuity of the nerve and avoiding after-effects. The benefit of the speed of PEC was demonstrated in our study.

Author’s contribution
All authors have contributed equally to the data’s acquisition, interpretation, and analysis. All authors have contributed equally to drafting and writing the manuscript. All authors have reviewed the paper and approved it to be published.

Informed Consent:
Written informed consent was obtained from all the participants.

Ethics Committee Approval
According ethics consent.

Conflict of Interest:
No potential conflict of interest relevant to this article was reported.

Research involving human participants, their data or biological material:
This is an observational case report with complete deidentification. So, ethics approval was optional for this type of case report at our institution.

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