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ORIGINAL ARTICLE

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Management of primary headache in emergency services of Santos and surrounding towns

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Objectives: Primary headaches are often seen by Clinicians on duty at Emergency Services. We have investigated the treatment of such patients by 43 medical doctors who have been working at Emergency Services in the city of Santos and surrounding towns for many years. **Results:** We confirmed the high prevalence of primary headaches in Emergency Services. There seem to be diagnosis difficulties concerning differentiating attacks of migraine and tension type headache. We also observed that IV dipirone was the most frequently prescribed treatment for patients with primary headaches in this study. There is no protocol in the literature which recommends IV dipirone for the treatment of migraine attacks or other primary headaches. **Conclusion:** It would be advisable to perform controlled double blind studies in order to verify the advantages of IV dipirone in the treatment of intense attacks primary headaches. We concluded that headache management recycling programs could be of interest for doctors who regularly work at Emergency Services.

UNITERMS: Headache. Migraine. Emergency. Treatment.

INTRODUCTION

Clinicians on duty at Emergency Services are frequently faced with patients presenting headache. These patients represent a challenge to the medical doctor who sees them: the correct diagnosis which will serve as the foundation for the appropriate therapy is especially difficult to achieve in the Emergency Service environment. The vast majority of these patients do not present a life-threatening condition, such as subarachnoid hemorrhage, intracranial infection or brain tumors. If such secondary and life-threatening causes of headache[1] are excluded as the reason for the emergency consultation, the clinician on duty is faced with the diagnosis of primary headache. For nearly 20 years it has been known that migraine accounts for 90% or more of these cases[2]. There are a number of protocols for treatment of acute migraine attacks at Emergency Services. It is perhaps worth referring to two of these protocols, which are likely to represent the largest Emergency Service centers for treatment of headaches[3,4]. Neither the American[3] nor the British[4] protocols include intravenous dipirone as an alternative for the treatment of acute migraine attacks. It was our impression, however, that IV dipirone was the first choice of treatment by most doctors attending primary headache in the city of Santos and surrounding towns.

We therefore designed a simple questionnaire for Clinicians to investigate their therapeutic approach to primary headache while on duty at Emergency Services.

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MATERIAL AND METHODS

Forty-three medical doctors volunteered to answer a standard questionnaire. They were doctors who have been working at Casualty and Emergency services in various hospitals in the city of Santos and surrounding areas for many years. We asked them how many cases of headache they usually see, what were the most frequent causes of primary headaches in their experience, how they treated these patients and what was the advice they gave to individuals with chronic headache who seek consultation at an Emergency Service for a particularly bad headache attack.

RESULTS

During every period of 24 hour duty at the Emergency Services in the hospitals, 88.4% of the doctors reported that they see at least one case of primary headache coming for treatment. Twenty doctors (46.5%) reported that they regularly attend to more than three cases of primary headache within the 24 hour duty period.

Most cases were diagnosed as migraine attacks or tension type headache. They estimated that migraine accounted for 45.2% of all cases seen, while tension type headache accounted for 40.3%.

The first option of treatment for either case (migraine or tension type headache) was intravenous dipirone 0.5 - 1.0g for 62.8% of the doctors. Nonsteroidal anti-inflammatory drugs (NSAIDs) were used in 32.6%, either in isolation or in association with dipirone, but more often the latter. Associated IV metoclopramide was used in 9.3% of the cases, and IV dexametasone was used in the same percentage of cases. Diazepan was used in 7.0% of the cases and IV hioscine was reported to be used by one doctor.

Chlorpromazine had been used by only two of the doctors and even then, not on a regular basis. Sumatriptan had been used by three doctors and most of those who answered the questionnaire said that they would use it more often, but the price of this drug was an important limiting factor. Ergotamine tartarate tablets had been used by 46.5% of the doctors attending to acute attacks of primary headache, independently of the diagnosis of migraine of tension type headache. None of these three drugs was the first choice treatment in any of the Casualty and Emergency services we visited.

Of all doctors interviewed, only three reported that they regularly recommend the use of isomepthen, ergotamin or analgesics for further headache attacks. However, 81.4% reported that they regularly suggest that the patient should seek advice for diagnosis and treatment outside of the Casualty and Emergency services. Most patients were referred to Neurologists, but many were referred to Ophthalmologists, Cardiologists, Nephrologists, General Practioners, Psychiatrists and Psycologists.

DISCUSSION

Our initial impression that headache is a frequent complaint in Emergency Services was confirmed by the Clinicians who answered this questionnaire. At least one case of headache is seen in every 24 hour duty period by almost all the doctors, and nearly half of them reported seeing at least three headache patients per 24 hour duty period. This fact alone justifies the importance of having updating courses on diagnosis and treatment of headache for doctors who work at Emergency Services regularly. The same applies to medical students in their last years at University, considering that they will soon be faced with many headache patients to treat at Casualty.

In the present study, tension type headache was diagnosed nearly as much as migraine. Tension type headache is dull in character and rarely presents an intensity of pain which will take the patient to an Emergency Service seeking medication, except perhaps in cases when analgesic abuse over a long period of time has rendered resistance to treatment[5]. It is possible that migraine attacks related to anxiety are receiving the diagnosis of tension type headache because the attack started in a situation of “tension”. To corroborate this proposal, we notice that for either migraine or tension type headache, the treatment was the same.

The majority of doctors regularly used IV dipirone for treatment of primary headache attacks. The use of IV dipirone is not seen in any of the protocols of migraine treatment reported in the literature. Indeed, it is only in Brazil that we have a report that dipirone is the drug of choice for patients who suffer from chronic headache[6,7]. Except for a possible role in raising the brain levels of serotonine[8,9], there are no controlled studies of the benefit of this drug in the management of migraine. We believe that doctors on Casualty duty in Santos are using IV dipirone out of previous experience, and not considering alternative treatments which do not have the possible side effects of IV dipirone, namely drowsiness, hypothermia and hypotension. However, due to the frequent use of dipirone in cases of primary headaches, this drug should undergo clinical trials as it may have a role in the treatment of acute attacks of primary headache.

NSAIDs were used by a third of the doctors, but often in association with dipirone. The recent review of Pfanfferath[10] mentions the beneficial effects of acetylsalicilic acid, naproxen, ibuprofen, tolfenamic acid, diclofenac, mefenamic acid, ketoprofen and pirprofen - but no mention of association with dipirone is made.

There are no studies which show a definite beneficial effect of dexamethasone on migraine[11] and the use of benzodiapenes should actually be discouraged in patients with recurrent headaches[3]. Though not often used by doctors in our studies, these drugs still had a role in the treatment of migraine in the Emergency Services we visited.

Lidocaine, either IV or as a nasal spray, was not used by any of the doctors we interviewed, and the literature still shows controversial results regarding the effect of lidocaine in acute migraine[12,13].

Dihydroergotamine (DHE) has had a role in the treatment of migraine for many years and most protocols of treatment recommend the inclusion of DHE for patients who are not chronic abusers of ergotamine[3,4,14-16]. Alternatives to oral tablets should be used in preference, considering that nausea is a common side effect. The use of metoclopramide or domperidone in association with DHE is also recommended for the same reason. In our study, when ergotamine was used, it was as tablets without association with antiemetic drugs.

Sumatriptan is a relatively new drug, a specific agonist at the HT-1D receptor, with good results in the treatment of migraine attacks[17]. However, its price renders it prohibitive in most Casualty services. Many doctors in our study were aware of the existence and benefits of this drug, as well as its price.

Relatively low doses of IV chlorpromazine have shown excellent results in the treatment of acute migraine in several reports[18-20]. The only side effect reported at the low doses employed was postural hypotension, which was easily avoided if good hydration was observed via IV injection of fluids, under careful monitoring of blood pressure. IM use of chlorpromazine failed to show similar relief from the headache attack[21]. Despite the very good results in trials with IV chlorpromazine, the availability of this drug in most Emergency Services and its low cost, we did not find it to be the first choice for migraine treatment by any of the doctors we interviewed.

Most doctors in our study usually refer their patients for proper investigation and treatment of their chronic headache. Though neurologists seem to be the specialists to whom most patients are referred, a variety of other specialists will also play a role in investigating and treating migraine - and perhaps tension type headache as well, if this diagnosis is confirmed. Perhaps the best time to prepare doctors to deal with headache patients is in the final years of the medical school and first years of residence. The teaching and researching of headache should be intensified at this time.

In conclusion, it is not realistic to expect that the physician on duty at an Emergency Service can provide a final solution for the chronic headache patient. The environment of a Casualty Service can hardly be expected to be odourless, silent and dark, and to provide the rest the patient needs. Patients with primary headache attending Emergency Services should be treated with effective drugs which will reduce their stay in these wards, and long-term treatment has to be proposed, if not by the Clinician on duty, then by the doctor to whom the patient is further referred. However, it could prove interesting to have a headache management recycling program for doctors who regularly work at Emergency Services and see so many migraine patients.

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RESUMO

Objetivos: Cefaléias primárias são freqüentemente vistas por clínicos de plantão em pronto-socorros. Os autores investigaram a abordagem terapêutica de pacientes com estas cefaléias por 43 médicos clínicos que há muitos anos trabalham em pronto-socorros na cidade de Santos e região vizinha. **Resultados:** A alta prevalência de casos de cefaléia primária foi confirmada. Parece haver dificuldade no diagnóstico diferencial de enxaqueca (migrânea) e cefaléia do tipo tensional. Também foi observado que dipirona EV é o tratamento de escolha para os pacientes com cefaléia primária. Não há protocolo descrito na literatura que recomende o uso de dipirona EV para o tratamento de ataques de enxaqueca ou de outras cefaléias primárias. **Conclusões:** Seria aconselhável que estudos duplo cego controlados fossem feitos para avaliação das vantagens do uso de dipirona EV no tratamento das crises intensas de cefaléias primárias. Os autores concluem que cursos de reciclagem sobre clínica e terapêutica das cefaléias poderiam ser do interesse dos médicos clínicos que trabalham em pronto-socorro.

REFERENCES

1. International Headache Society. Classification and diagnostic criteria for headache disorders, cranial neuralgias and facial pain. Cephalalgia 1988; 8(suppl 7): 1-96.
2. Olesen J, Aebelholt A, Veilis B. The Copenhagen acute headache clinic: organization, patient material and treatment results. Headache 1979; 19: 223-7.
3. Raskin NH. Treatment of status migrainosus: the American experience. Headache 1990; 30 (2): 549-53.
4. Wilkinson M. Treatment of acute migraine: the British experience. Headache 1990; 30 (2): 544-9.
5. Olesen J, Rasmussen BK. Management of acute non-vascular headache: the Danish experience. Headache 1990; 30 (2): 540-3.
6. Hannuch SNM, Zuckerman E, Lima JGC, Mansur J. Use and abuse of analgesic and ergotamine drugs in patients attending a headache unit: a study in Sao Paulo, Brazil. Cephalalgia 1987; 7(6): 488-9.
7. Hannuch SNM, Zuckerman E, Mansur J, Lima JGC. Use of substances for immediate management of pain in patients with headache. Rev Assoc Med Bras 1992; 38: 17-23.
8. Khayyal MT, Samaan HA, Galal EE. The antagonism of the analgesic effect of dipirone by l-dopa and its relation to brain amine concentrations. J Pharm Pharmac 1978; 30: 195-6.
9. Lechin F, van der Dijs B. Physiological, clinical and therapeutic basis of a new hypothesis for headache. Headache 1980; 20:77-84.
10. Pfanfferath V, Scherzer S. Analgesics and NSAIDs in the treatment of the acute migraine attack. Cephalalgia 1995; suppl 15: 14-20.
11. Edmeads J. Narcotic alternatives in acute migraine. Headache 1985; 25: 339.
12. Reutens DC, Fatovich DM, Steward-Wynne EG, Prentice DA. Is intravenous lidocaine clinically effective in acute migraine? Cephalalgia 1991; 11: 245-8.
13. Kudrow L, Kudrow DB, Sandweiss JH. Rapid and sustained relief of migraine attacks with intranasal lidocaine: preliminary findings. Headache 1995; 35: 79-82.
14. Callaham M, Raskin N. A controlled study of dihydroergotamine in the treatment of acute migraine headache. Headache 1986; 26: 168-71.
15. Edmeads J. Emergency management of headache. Headache 1988; 28: 675-9.
16. Belgrade MJ, Ling LJ, Shelevgot MB, Ettinger MG, Ruiz E. Comparison of single-dose meperidine, buthorphanol and dihydroergotamine in the treatment of vascular headache. Neurology 1989; 39: 590-2.
17. Peroutka SJ. Sumatriptan in acute migraine: pharmacology and review of the world experience. Headache 1990; 30 (2): 554-60.
18. Lane PL, Ross R. Intravenous chlorpromazine - preliminary results in acute migraine. Headache 1985; 25: 302-4.
19. Lane PL, McLellan BA, Baggoley CJ. Comparative efficacy of chlorpromazine and meperidine with dimenhydrinate in migraine headache. Ann Emerg Med 1989; 18: 360-5.
20. Bell R, Montoya D, Shuaib A, Lee MA. A comparative trial of three agents in the treatment of acute migraine headache. Ann Emerg Med 1990; 19: 1079-82.
21. McEwen JI, O'Connor HM, Dinsdale HB. Treatment of migraine with intramuscular chlorpromazine. Ann Emerg Med 1987; 16: 758-63.