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CASE STUDY

Síndrome PFAPA

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KEYWORDS
PFAPA syndrome;
Periodic fever;
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Abstract
PFAPA syndrome is characterized by periodic fever, pharyngitis, cervical adenitis, and aphthous stomatitis. The bouts of fever can last for days or even weeks. Between crises, patients remain asymptomatic for variable periods. It appears before the age of five and has limited duration (4-8 years). Its aetiopathogeny is unknown. Corticoids are the treatment of choice. Tonsillectomy has been proposed as a solution but remains controversial. We present the case of a 4-year-old girl with PFAPA syndrome who underwent tonsillectomy in January, 2008 and review the literature.

PALABRAS CLAVE
Síndrome PFAPA;
Fiebre periódica;
Corticoterapia;
Amigdalectomía

Síndrome PFAPA

Resumen
El síndrome PFAPA se caracteriza por fiebre periódica, faringitis, adenitis cervical y estomatitis aftosa. Los episodios febriles pueden durar desde días hasta semanas y están separados por períodos asintomáticos y de duración variable. Se presenta antes de los 5 años y tiene duración limitada (4-8 años). Su etiopatogenia es desconocida. El tratamiento más aceptado es la corticoterapia. La amigdalectomía ha sido propuesta como una solución, sin conclusiones definitivas. Presentamos el caso de una paciente de 4 años diagnosticada de síndrome PFAPA, sometida a amigdalectomía en enero de 2008 y hacemos una revisión de la literatura.

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Introduction

PFAPA syndrome (acronym for Periodic Fever, Aphtae, Pharyngitis, and cervical Adenopathies) was first described in 1987 by Marshall. It is one of the causes of recurrent fever in paediatrics and is characterized by recurrent episodes of fever (every 3 to 6 weeks), accompanied in 65%-80% of cases by pharyngitis, oral aphthae, and cervical lymphadenopathy. It is sometimes accompanied by constitutional symptoms. Each episode takes place with high fever for 3-6 days and remits independently of the use of antibiotics. Children are asymptomatic between episodes, with normal development. It begins before the age of 5 years, is benign and there have been no after-effects after its disappearance, usually after about 4 years from its start.

There may be leukocytosis and elevation of erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP). Microbiological and immunological studies are negative, but there may be an elevation of immunoglobulin D (IgD).

Other causes of periodic fever should be ruled out: cyclic neutropenia, hyperimmunoglobulin D syndrome, familial Mediterranean fever, Behçet's disease, and juvenile idiopathic arthritis.

Case Report

A 4-year-old girl without any personal history of interest, admitted several times since the first year of life due to high fever (39-40°C), pharyngitis, cervical lymphadenopathies, oral aphthae, and cutaneous exanthema.

Leukocytosis presents in the episodes together with elevated ESR. The girl is asymptomatic between episodes, with normal development for her age.

Oral corticosteroid therapy was initiated, with rapid resolution of fever. In January, 2008, she underwent adenotonsillectomy and her evolution since then has been favourable.

Discussion

The aetiology of PFAPA syndrome is unknown, but infectious and immunological mechanisms have been implicated.

Forsvoll et al[1] reported that the concentrations of CRP are strongly increased during the febrile episodes, which may indicate immune mechanisms.

It responds very well to corticosteroid therapy, suggesting that symptoms may be caused by inflammatory cytokines. Preliminary studies[2] show an increase of cytokines during bouts of fever, mainly interferon-gamma, tumour necrosis factor and interleukin 6.

The most widely-accepted treatment is corticosteroids, oral prednisolone (1 mg/kg/day, 3 to 5 days). Generally 1 or 2 doses of prednisolone dramatically shorten the duration of fever without reducing the number of outbreaks. This response is unique to PFAPA syndrome and can serve as a diagnostic criterion.

Other proposed treatments include cimetidine and tonsillectomy. Wong et al[3] and Licamelli et al[4] reported that 8 out of 9 children, and 26 out of 27 children, respectively, showed complete remission of symptoms after tonsillectomy. Isaacs et al[5] conclude that tonsillectomy is effective in two thirds of cases.

In the case reported here, the patient was subjected to adenotonsillectomy due to presenting, along with fever, bouts of pharyngitis and adenotonsillar hypertrophy. After 6 months of follow-up, she presents complete remission of symptoms. Our results are in accordance with the articles presented here and indicate that tonsillectomy is an effective treatment for PFAPA syndrome.[6-12]

Conclusions

PFAPA syndrome is a rare, little-known disease. The diagnosis is clinical and is based on periodic fever, aphthae, pharyngitis, and lymphadenopathy, with normal development.

The most accepted treatment is corticosteroids. Tonsillectomy is mentioned in several articles and has been effective in the case reported.

Conflict of interests

The authors have indicated there is no conflict of interest.

References

1. Forsvoll JA, Oymar Knut. C-reactive protein in the periodic fever, aphthous stomatitis, pharyngitis and cervical adenitis (PFAPA) syndrome. Acta Paediatrica. 2007;96:1670-3.
2. Hernández-Bou S, Giner M, Plaza AM, Sierra JI, Martín Mateos MA. PFAPA syndrome: with regard to a case. Allergol Immunopathol. 2003;31:236-9.
3. Wong KK, Finlay, Moxham J P. Role of tonsillectomy in PFAPA syndrome. Arch Otolaryngol Head Neck Surg. 2008;134:16-9.
4. Licamelli G, Jeffrey J, Luz J, Jones D, Kenna M. Effect of adenotonsillectomy in FAPA syndrome. Arch Otolaryngol Head Neck Surg. 2008;134:136-40.
5. Isaacs D, May M. Recurrent episodes of fever with tonsillitis, mouth ulcers and adenopathy. JPCH. 2003;39:627-8.
6. Parikh SR, Reiter ER, Kenna MA, Roberson D. Utility of tonsillectomy in 2 patients with the syndrome of periodic fever, aphthous stomatitis, pharyngitis and cervical adenitis. Arch Otolaryngol Head Neck Surg. 2003;129:670-3.
7. Silber M. Síndrome da febre periódica, adenite, faringita, estomatite aftosa. Einstein. 2005;3:292-3.
8. Fonseca, Cherubini K. Aspectos de interesse clínico sobre a síndrome PFAPA (febre periódica, estomatite aftosa, faringita e adenite). Scientia EDICA, Porto Alegre: PUCRS. 2005;15: 68-73.
9. Lierl M. Periodic fever syndromes: a diagnostic challenge for the allergist. Allergy. 2007;62:1349-58.
10. Renko M, Salo E, Putto-Laurila, Saxen H, Mattila PS, Luotonen J, et al. A randomized, controlled trial of tonsillectomy in periodic fever, aphthous stomatitis, pharyngitis and adenitis syndrome. J Pediatr. 2007;151:289-92.
11. Lierl M. Periodic fever syndromes: a diagnostic challenge for the allergist. Allergy. 2007;62:1349-58.
12. Gómez BS, Castiella TM, García ER, Esarte EG, Garicano JM. Síndrome PFAPA, un reto para el pediatra. An Pediatr (Barc). 2007;66:625-34.