

Treatment of Hemangioma with High Dose Oral Corticosteroid

M Sjabaroeddin Loebis, Zakaria Siregar, Nuraida

Department of Child Health, Medical School, University of North Sumatera,
Medan, Indonesia

ABSTRACT A case with diagnosis of cavernous hemangioma in the hard palate was successfully treated with 4-6 weeks of high dosage prednisone (2-3 mg/kgBW/day). Diagnosis of cavernous hemangioma was established based on physical examination. There was a mass in the hard palate, continuously bleeding and difficult to treat. After 4-6 weeks treatment, the hemangioma regressed and never recurrent anymore. [Paediatr Indones 1999; 39:177-180]

Introduction

Hemangioma is the most common neoplasm found in infants and children. It consists of a proliferation of endothelial cells. Most hemangioma occurs in the skin but may be found anywhere in the body including the viscera and solid organs.¹⁻³ The pathogenesis of hemangioma is poorly understood; perhaps it is associated with the development of blood supply of an embryonic limb bud.¹⁻² Hemangioma may be classified as capillary, capillary-cavernous, cavernous and other hemangiomas.⁴ Most such hemangiomas become evident before the age of 6 months. The sex distribution is equal between boys and girls. Cavernous hemangioma is found in 15% of cases; is deeply located and more diffuse. The lesions are cystic, firm or compressible and the overlying skin may appear normal in color or bluish hue. There are numerous dilated vascular spaces within the dermis and subcutaneous tissues.³

The natural history of hemangioma is unpredictable. It is characterized by two stages, i.e., proliferation and involution.^{1,2} In a few children the hemangioma can be large, rapidly growing and can produce seriously complications such as airway obstruction, pressure necrosis of surrounding tissues, difficulty in feeding, secondary infection and bleeding through the ulceration of the overlying skin. In some patients it may cause hemolysis, thrombocytopenia and hypofibrinogenemia.¹⁻⁵ In the 1970's treatment for hemangiomas included radiotherapy, destruction by other agents, laser, diathermy and cryoprobes. Recently in the 1990's, the management of hemangioma may include steroid therapy. It is reported that prednisone hasten the onset and rate of involution of hemangiomas in the range 30-90%. The usual dosage 2-3 mg/kgBW/day of prednisone given orally for 2-3 weeks. If the hemangioma respond the dosage can be decreased to 1 mg/kgbw/day or alternate day regiment, with further reduction of dosage to 0.75 mg/kgbw/day. Usually prednisone is given for a cycle of 4-6 weeks, followed by arrest period. Chemotherapy with cyclophosphamide has been used to hemangioma if had not responded to steroid and radiation therapy. If medical management failed, embolization, radiation, laser therapy or surgical intervention should be performed.⁶ Resolution of hemangioma occurs in >50% of children by age 5 years and in >70% by the age of 7 years, with continued improvement in the remaining children until 10-12 years.² We report our experience in treating bleeding hematoma with high dose oral corticosteroid.

Report of the Case

An Indonesian girl of 6 months old was admitted to the Pediatric Department Tembakau Deli Hospital on June 14th 1996 with complaint of bleeding mass in the hard palate. This had been noted by parents since 4 months before. Initially it was small, but became bigger. Recurrent bleeding of the mass occurred during 1 week prior to admission, especially after meal. The amount of bleeding was estimated to be approximately 15 ml every day. The child had feeding difficulty because of the hemangioma.

The patients was spontaneously born at home with the birth weight of 2750 grams. She was the last child of four siblings. Her father was 30 years old, a semi-private company employee. Her mother was 27 years old, house wife. Her parents and the other siblings were apparently healthy. She had not completed immunization yet. On regional examination of head there was a mass with a size of 3x3x2,5 cm in the hard palate, cystic, firm, chocolate in color with ulceration and bleeding. The patient was consulted the ENT, Oral Surgery, Cardiovascular Surgery, Pediatric Surgery and Radiology Divisions with the conclusion cavernous hemangioma.

We have no experience in excision of large hemangioma of hard palate in children. Embolization treatment was not available, as was soft x-ray radiotherapy. Since the patient bled continuously and had feeding difficulty, we administered antibiotic, and

diet with nasogastric tube feeding. The Dermatology Department suggested to give high dosage prednisone.

On follow up in the first week, no bleeding occurred anymore. At the end of 2nd week the mass size became smaller. In the 3rd week prednisone dose was reduced to 1 mg/kgBW/day and the mass size definitely became far smaller. On the 5th week the dose of prednisone was further reduced to 0.75 mg/kgBW/day and we observed a regression of the hemangioma. Steroid therapy was discontinued in the 9th weeks. We decided to continue the treatment until 9 weeks since the bleeding recurred in the 6th week when oral feeding was given before the hemangioma completely disappeared. On follow-up, the hemangioma had disappeared and she was able to eat rice porridge without any bleeding. Body weight increased to 6 000 gram.

Discussion

Hemangioma is most common neoplasm in pediatric age group. In this case, the parents noted when the patients was 2 months old. According literature, most hemangiomas become evident before the age of 6 months, and they are found in approximately 2.5% of newborns.^{1,5} In this case the diagnosis of cavernous hemangioma was established by clinical appearance and physical examination. Microscopically it is difficult to differentiate of hemangioma, accordingly we didn't perform it.⁴

In most cases, hemangioma is located in the skin, and no specific treatment is necessary, since it will regress spontaneously after several months or years. However, hemangioma that is located in specific area may give rise to some difficulties for the patients. Hemangioma located on the head and neck may produce serious complications. In this case, rapidly growing hemangioma located on the hard palate had given a complication in the form of ulceration, bleeding and feeding difficulty. Steroid therapy was given to manage of recurrent bleeding hemangioma with good result. According to literature administration of high dosage oral steroid for cases of hemangioma before the age of 8 months old is most successful.⁶

References

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