



Short Communication

Dental management of children with congenital cardiac conditions

Karthik S^{1,*}, MB Sridevi¹, Evangeline Cynthia D¹

¹Dept. of General Dentistry/Oral Pathology, Mercy Multispeciality Dental Centre, Chennai, Tamil Nadu, India



ARTICLE INFO

Article history:

Received 25-05-2020

Accepted 30-05-2020

Available online 06-08-2020

© 2020 Published by Innovative Publication. This is an open access article under the CC BY-NC license (<https://creativecommons.org/licenses/by-nc/4.0/>)

1. Congenital cardiac anomalies accounts for 80% of paediatric cardiovascular conditions.

2. Classification

1. Acyanotic defects with shunts such as atrial septal defect, ventricular septal defect and patent ductus arteriosus.
2. Acyanotic defects with obstruction such as pulmonary stenosis, congenital narrowing of aorta and aortic stenosis.
3. Cyanotic defects with shunts such as Fallot's tetralogy, transposition of great arteries and truncus arteriosus.

3. General clinical manifestations

Stress intolerance

Fatigue

Shortness of breath

Delayed growth

Feeding difficulty

Clubbing of fingers

Heart sounds (murmur, thrill, click) and difference in the heart rate

4. Pathognomonic intraoral features

Developmental defects involving enamel pertaining to deciduous dentition

Dental caries

Cyanotic gingivitis

Delayed tooth eruption

Intrinsic tooth stain

Periodontal disease

Malocclusion

Crowding

5. Medical implications

Bacterial resistance

Bacterial endocarditis and

Profuse bleeding

6. Dental management

Elimination of oral infection thereby reducing the risk of bacterial endocarditis

Maintainance of good oral hygiene

Effective communication with paediatric cardiologist

Chlorhexidene mouthwash¹

7. Determine INR

Stress reduction with the help of sedation or general anesthesia

* Corresponding author.

E-mail address: drkarthiks1981@gmail.com (Karthik S).

Antibiotic prophylaxis (administration of amoxicillin single dose before 30 – 60 minutes of dental procedure)

Avoid adrenaline during administration of local anaesthesia²

Routine regimene includes 50 mg/kg intraorally Amoxy-cillin. If allergic, then 20 mg/kg Clindamycin or 50 mg/kg Cephalexin or 15 mg /kg Clartithromycin /Azithromycin

8. Cardiac conditions which require antibiotic prophylaxis during dental procedures:

Previous endocarditis

Prosthetic heart valves

Congenital heart disease.

9. Antibiotic prophylaxis recommended dental procedures:

Extraction

Periodontal treatment

Root canal therapy

Placement of dental implant

Reimplantation of avulsed tooth

Placement of orthodontic bands

Oral prophylaxis

10. Antibiotic prophylaxis is not recommended for following conditions:

Clinical examination

Dental xrays

Placement of removable orthodontic appliances

Placement of prosthodontic appliances

Placement of orthodontic brackets

Adjustment of orthodontic appliances

Exfoliation of deciduous tooth

Minor trauma pertaining to labial or buccal mucosa.³

11. Acknowledgements

Childs Trust Medical Research Foundation (CTMRF) Kanchi Kamakoti Childs Trust Hospital 12-A, Nageswara Road, Nungambakkam, Chennai – 600034, Tamilnadu, India Ph: 0091-44-42001800

12. Source of Funding

None.

13. Conflict of Interest

None.

References

1. Tasioula V, Balmer R, Parsons J. Dental Health and Treatment in a Group of Children with Congenital Heart Disease. *J Pediatr Dent.* 2008;30(4):323-328.
2. Jiménez Y, Poveda R, Gavaldá C, Margaix M, Sarrión G. 2008.
3. Wilson W, Taubert KA, Gewitz M, Lockhart PB, Baddour LM, Levison M, et al. Prevention of Infective Endocarditis: Guidelines from the American Heart Association: A guideline from the American Heart Association Rheumatic Fever, Endocarditis and Kawasaki Disease Committee. *Clinical Cardiology.* 2008;139:3-24.

Author biography

Karthik S Consultant

MB Sridevi Consultant

Evangeline Cynthia D Consultant

Cite this article: Karthik S , MB Sridevi , Cynthia D E. **Dental management of children with congenital cardiac conditions.** *Int Dent J Students Res* 2020;8(2):94-95.