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| **Name:** |
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| **Pathology Question:** |
| What causes disc displacement with reduction? |
| **Report:** |
| Disc displacement with reduction is a disorder of the Tempromandibular Joint (TMJ). According to the American Academy of Orofacial pain, a TMD (Tempomandibular Disorder) is described as a group of disorders involving the masticatory muscles, the TMJ, and the associated structures. The most common disorders are pain related and intra-articular disorders, which are defined as an abnormal positional relationship between the disc and the condyle, articular eminence, and/or articular fossa.  Among the intra-articular disorders of the TMJ, disc displacement with reduction (DDWR) corresponds to 41% of clinical diagnoses, and can occur in 33% of asymptomatic individuals. What happens with DDWR is when the mouth is closed, the articular disc is displaced in relation to the condyle, and upon closing, the disc returns to its normal position between the condyle and the articular tubercle. It is a highly prevalent clinical condition which still raises many doubts regarding the true risk of the disorder, the prognosis, and need for treatment. And although the disc can be displaced in any direction, pure lateral and posterior displacements are rather rare, with anterior displacements being the most common.  The range of motion in individuals who suffer from DDWR is not affected, however mandibular movements may not be as smooth compared to individuals with normal condyle/disc relationships and are often accompanied with clicking, snapping, and/or popping. Most cases of DDWR are not accompanied with pain; what is interesting however is that asymptomatic individuals had significantly lower PPT (Pressure Pain Threshold) compared to individuals with proper functioning TMJs.  The etiology of DDWR is complicated. Displacement happens due to the elongation of the lateral collateral ligaments and/or retrodiscal tissues. Factors leading to DDWR are partially attributed to microtrauma and microtrauma. Those include abnormal mechanical forces applied to the condyle (such as bruxism, stress, clenching, trauma, and para-functions amongst others) which alter the shape and function of the articular tissues. A thinning on the posterior border of the disc may also make the disc more likely to be anteriorly displaced. There is a higher observed prelance in female patients as well as an association with age.  This condition is stable, and in the absence of complaints, no treatment is recommended as there is no gold standard treatment. Treatment should be done when the patient’s chief complaint is the DDWR or the if the condition is presenting with pain. |
| **References:** |
| |  |  | | --- | --- | | (1) | Poluha, R. L.; Canales, G. D. la T.; Costa, Y. M.; Grossmann, E.; Bonjardim, L. R.; Conti, P. C. R. Temporomandibular Joint Disc Displacement with Reduction: A Review of Mechanisms and Clinical Presentation. *J. Appl. Oral Sci.* **2019**, *27* (0), e20180433. | | (2) | Gonzaga AR, L.-S. M.; Ribeiro EC, G. A. S. Disc Displacement with Reduction of the Temporomandibular Joint: The Real Need for Treatment. *J. Pain Relief* **2015**, *04* (05), 1–5. | | (3) | Marley-. TMJ internal derangements https://www.oralhealthgroup.com/features/tmj-internal-derangements/ (accessed Oct 23, 2020). | |