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**T-scan & Orthodontics: What do we have in hands?****Rim Fathalla\***

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One of the main objectives of the orthodontic treatment is improving the masticatory and postural function, which in turn permits functional comfort. Since dealing with complex malocclusions with fixed appliances implies that the orthodontist modify dental contacts to achieve a new position of equilibrium, the evaluation of the occlusion during the patient initial examination and during the different stages of treatment is essential. Also, the assessment of the quality of the final occlusion of the treated cases is mandatory in terms of stability and masticatory efficiency. Throughout the years, orthodontists have evaluated the quality of occlusal contacts by different techniques: direct visual inspection, articulating paper marks, polyether rubber impression bites and others. However, these methods were time-consuming and inaccurate. The ideal static occlusal relationships don't necessarily result in ideal functional occlusal relationships. Moreover, the outcome orthodontic indexes assess the aesthetic and morphologic endpoints and don't determine any functional occlusal relationships. Nowadays, by using computerized tools like the T-scan system, the occlusal forces and occlusal contact data can be easily evaluated throughout the arches in real time, dynamically and in different clinical situations.

**Objectives of this lecture are :**

1. To shed the light on the T-scan system and how it's used to measure the occlusal bite force.
2. To understand the effect of orthodontic treatment on the occlusal bite force.
3. To understand why it's important to monitor the changes in the occlusal forces and occlusal contact areas throughout the treatment process and during the follow-up.

**Statistical results of the related studies cited in the literature:**

found that the T-scan is a quantitative and a reliable method for occlusal assessment and that the settling of occlusion seems not to improve the functional occlusion after debonding. Hence, it's mandatory to check the functional occlusion before the appliance is removed in order to eliminate any unsatisfying functional occlusal contacts.

**Conclusions:**

1. The new digital occlusal analysis systems offer many solutions for the orthodontist to accurately determine the distribution of bite force, the center of force trajectory path and the occluding and disclosing times.
2. Digital Orthodontics is not the future. It's the present.

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**Keywords:** T-scan, occlusion, Orthodontics, occlusion time, bite force.

## Biography:

She got my Bachelor degree of Dentistry in 2009 from Suez Canal University And my Master Degree in Orthodontics in 2017 from Suez Canal University and I'm currently a PhD researcher in Orthodontics. I'm an Assistant Lecturer of Orthodontics. I was a former speaker at the annual conference of the Egyptian society of Orthodontics in 2019. Also, she was a speaker at IMCAS congress held in Paris in 2020 and I gave a lecture recently in EDSIC Ortho last August.