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Service (sector) Cataract N° CEP

EVALUATION AND COMPARISON OF SURGICAL STRESS DURING PHACOEMULSIFICATION AND ITS CORRELATION WITH SURGICAL EXPERIENCE

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PURPOSE – To evaluate the stress of surgeons during cataract surgery and its relation with their experience, comparing the results in two different stages of the learning curve. **METHODS** – Two surgeons were evaluated using a Holter cardiovascular monitor during phacoemulsification: surgeon A (resident) performed 4 surgeries at the beginning of his learning curve (Period 1) and then 3 more surgeries after more than 100 surgeries (Period 2). Surgeon B (experienced surgeon) performed 3 surgeries in Period 1, and 2 surgeries in period 2. Both of them performed the procedures together. Holter results were correlated with the different surgical steps through video documentation. Twelve eyes of twelve patients ranging from 62 to 78 years who underwent phacoemulsification were enrolled in this study. All patients had visual acuity between 20/80 and 20/200 in the eye with cataract and 20/30 or better in the other eye and no associated ocular and/or systemic disease. **RESULTS** – From all procedures, two of them (Period 1) were excluded for absence of Holter data. During the Period 1 the surgeon A started the surgeries with an average heart rate (HR) of 63 (ranging from 60 to 103) and his HR during rest was 60. The surgeon B started the surgeries with an average HR of 100 (ranging from 83 to 140) and his HR during rest was 85. Both surgeons had no cardiovascular diseases. Only one surgery had a serious complication with the possibility of nucleus luxation into the vitreous. Surgeon A did not realize it, causing increased HR in surgeon B. In addition, surgeon B showed anxiety during all procedures, sustaining a higher HR during the surgeries performed by surgeon A than in those he performed himself. During the period 2, surgeon A started the surgery with HR 83 (75-110) showing more concern during the different steps of the procedure. Surgeon B did not demonstrate a difference during the surgeries he performed himself, and showed less concern during the surgeries performed by surgeon A. **CONCLUSIONS** - Surgeon A showed increased concern throughout his learning curve and surgeon B presented more concern during the delicate steps of surgery performed by Surgeon A during the first period and his stress decreased in the second period.