

主 論 文 要 旨

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Effectiveness of Autologous Serum Eye Drops Combined With Punctal Plugs for the Treatment of Sjögren Syndrome-Related Dry Eye (シェーグレン症候群に關与するドライアイにおける血清点眼と涙点プラグ併用の有効性)					
(内容の要旨)					
<p>Sjögren syndrome related dry eye (SS dry eye) is a type of tear deficient dry eye that results from autoimmune destruction of the lacrimal gland. As a refractory dry eye disease, pro-inflammatory cytokines in SS can result in inflammation and cumulative damage to the lacrimal gland, which leads to desiccating stress on the ocular surface. Hence, it is important to seek effective and safe treatments for SS dry eye. The combination of punctal plugs (PP) and autologous serum (AS) eye drops has been proposed as an effective treatment for SS dry eye. To evaluate the effectiveness and long-term prognosis of AS eye drops combined with PP, I retrospectively observed SS dry eye patients who benefited from both treatments over and extended time period. 28 patients (56 eyes) diagnosed with primary or secondary SS were enrolled. Those with moderate to severe dry eye underwent conventional dry eye treatment and/or punctal occlusion/plugs before being administered AS eye drops. Severity of dry eye was based on data from medical records, including basic information and medical examination. The ocular surface was evaluated by Schirmer test, tear break-up time (tBUT), fluorescein (FL) and rose-bengal (RB) staining score which were reviewed at: baseline, 3 months, 6 months, 1 year, and more than 1 year (>1 year) follow-up. Patient age ranged from 19 to 78 years; mean age was 55.6 ± 13.8 years. All patients were treated with AS eye drops for mean follow-up of 42.3 ± 26.1 months. By using AS eye drops, the mean tBUT and FL staining scores were significantly improved at 3 month, 6 month, 1 year and >1 year compared with baseline ($P < 0.01$), and the mean RB staining scores were significantly improved after 6 months compared to baseline ($P < 0.01$, $P < 0.05$, $P < 0.01$ respectively). The effectiveness of AS only (17 eyes), and AS combined with PP (AS+PP) (12 eyes) were compared. After the treatment at each time point, the mean tBUT was significantly higher in AS+PP group at 1 year of treatment and >1 year of treatment compared with AS only group ($P < 0.01$). The improvement in RB staining scores was significant in AS+PP group compared with AS only group after 1 year of treatment and >1 year of treatment. ($P < 0.01$ and $P < 0.05$, respectively). During our investigation period, no side-effects related to AS and PP application were observed. In conclusion, this study observed improvements in both tear stability, and ocular surface vital staining scores in SS dry eye patients. The results highlight the effectiveness and the safety of the long-term application of AS eye drops, but also the beneficial effects of the combination of AS eye drops with PP. It could be helpful in the research of the treatment of SS dry eye.</p>					