Table 1. Characteristics of the studies included.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Authors** | **Year** | **Study design** | **Number of patients underwent**  **Arthrocentesis** | | **Gender** | **Mean age** | **Follow-up** | **Adjunctive treatment** | **Duration of conservative treatment** | **Type of conservative treatment** | **Diagnostic problem subgroup** |
| Prager et al. | 2007 | Pros double-blind clinical trial | Group 1: 20  Group 2: 20 | | 29F, 11M | 36.4 | 2 weeks | Group 1: buprenophrine  Group 2: Saline | 6 months to 3 years | occlusal splints, physiotherapy, and analgesic drugs | anterior disc displacement with or without reduction |
| Sembronio et al. | 2008 | RCT | 33 | | 31F, 2M | 41.8 | 1 year | Sodium Hyaluronate | n/a | n/a | anterior disc displacement without reduction |
| Neeli et al. | 2010 | pros | 30 | | Not reported | Not reported | 1 year | no | 1 month | NSAIDs and occlusal splints | Internal derrangement |
| Vos et al. | 2014 | RCT,  pros | 40 | | 29F, 11M | 38.3 | 3, 12, 26 weeks | no | n/a | n/a | arthralgia |
| Senturk et al. | 2015 | pros | Single puncture: 20  Double puncture: 20 | | Single puncture:  14F, 6M  Double puncture:  17F, 3M | Single puncture:  32  Double puncture:  33 | 1 day, 1 week,  1 month | no | At least 3 months | Splints | Wilkes stages 3 and 4 |
| Tatli et al. | 2017 | RCT, pros | Group 1: 40  Group 2: 40 | | Group 1:  35F, 5M  Group 2:  39F, 1M | Group 1:  35.2  Group 2:  38.9 | 1, 3, 6 months | Group1:  HA  Group2:  HA+splint | 2 weeks | daily NSAIDs, muscle relaxant drug, soft diet, physical exercises | DDwoR |
| Attia et al. | 2017 | pros | Success:31  Failure: 5 | | Group 1:  32F, 8M  Group 2:  2F, 3M | Not reported | 1 month | HA | At least 6 months | Not reported | DDwoR |
| Yapici-Yavuz et al. | 2018 | RCT,  pros | Group 1  Group 2  Group 3  Group 4 | 44 | 38F, 8M | Not reported | 1 week,  1, 3, 6 months | Group 1:  no  Group 2:  HA  Group 3:  Methypred nisolone acetate  Group 4:  tenoxicam | n/a | n/a | Non-reducing disc displacement |
| Bayramoglu et al. | 2019 | RCT,  pros | Single puncture: 16  Double puncture: 16 | | Group 1:  15F, 1M  Group 2:  14F, 2M | Group 1:  25.19  Group 2:  25.75 | 1 week,  1,6 months | no | At least 3 months | Not reported | Wilkes stages 3 and 4 |
| Toameh MH et al. | 2019 | RCT,  pros | Group 1: 10  Group 2: 10  Group 3: 10 | | Group 1:  8F, 2M  Group 2:  7F, 3M  Group 3:  9F, 1 M | Group 1:  40.53  Group 2:  38.26  Group 3:  37.82 | 1, 3, 6, 9 months | Group 1: no  Group 2: HA  Group 3: PRP injection | At least 3 months | pharmacotherapy, soft diet, jaw exercises, or occlusal splint therapy | DDwoR |
| Yilmaz et al. | 2019 | RCT, pros | Group 1a: 18  Group 2a: 19 | | Group 1: 17F, 1M  Group 2:  16F, 3M | Group 1:  31.67  Group 2:  31.05 | 6 months | Group 1a: HA  Group 2a: HA | Group 1: n/a  Group 2: n/a | Group 1:n/a  Group 2:n/a | Group 1: DDwR  Group 2: DDwoR |

F, female; M, male; RCT, randomized clinical trial; pros, prospective study; HA, hyaluronic acid; PRP, platelet-rich plasma (PRP); DDwR; disc displacement with reduction; DDwoR; disc displacement without reduction.

Table 2. Critical appraisal of the studies included (quality assessment).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Authors** | **Year of publication** | **Random selection in population** | **Defined inclusion/ exclusion criteria** | **Loss of**  **follow-up** | **Validated measurement** | **Statistical analysis** | **Estimated potential risk of bias** |
| Yilmaz et al. | 2019 | Yes | Yes | No | Yes | Yes | Moderate |
| Toameh et al. | 2019 | Yes | Yes | No | Yes | Yes | Moderate |
| Bayramoğlu et al. | 2019 | Yes | Yes | No | Yes | Yes | Moderate |
| Yapıcı-Yavuz et al. | 2018 | Yes | Yes | No | Yes | Yes | Moderate |
| Attia et al. | 2018 | No | No | No | Yes | Yes | High |
| Tatli et al. | 2017 | Yes | Yes | Yes | Yes | Yes | Low |
| Şentürk et al. | 2016 | Yes | Yes | No | Yes | Yes | Moderate |
| Vos et al. | 2014 | Yes | Yes | Yes | Yes | Yes | Low |
| Neeli et al. | 2010 | No | Yes | No | Yes | Yes | High |
| Sembronio et al. | 2008 | No | No | No | Yes | Yes | High |
| Präger et al. | 2007 | Yes | No | No | Yes | Yes | High |



Figure 1.



Figure 2.



Figure 3.



Figure 4.



Figure 5.



Figure 6.



Figure 7.



Figure 8.



Figure 9.