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Appendix 1: Preliminary Item list (66 items in 8 categories)

NOTE: The following list of items is NOT the definitive recommended set of principles of Pavlik harness management in DDH as presented in the accompanying manuscript. Rather this is the initial set of statements gained from a literature review which informed the basis of the multiple rounds of surveying to build the final set of principles to guide treatment. Therefore, this list can be used to identify the changes that occurred during the consensus methodology to construct the final set of principles which can be found in Table 1 and Table 2 of the published manuscript.

Treatment Initiation

1. The oldest age to begin PH treatment is 6 months of age.
2. An ultrasound is necessary to determine the need for PH treatment.
3. A clinical examination is necessary to determine the need for PH treatment.
4. An orthopaedic surgeon should be the individual to perform an ultrasound prior to starting PH treatment.
5. An orthopaedic surgeon should be the individual to perform a clinical examination prior to starting PH treatment.

Stable Dysplastic Hip

1. PH treatment is indicated for a stable dysplastic hip.
2. A hip that is stable dysplastic should start PH treatment in the first week of life.
3. A hip that is stable dysplastic should start PH treatment in the first seven weeks of life.
4. For a hip that is stable dysplastic, hip progress should be monitored via clinical examination every 2-3 weeks.
5. For a hip that is stable dysplastic, hip progress should be monitored via ultrasound every 2-3 weeks.
6. For a hip that is stable dysplastic, a clinic visit should occur every 2-3 weeks to check and adjust the PH.
7. A hip that is Graf type IIc/stable dysplastic should be treated for 12 weeks.
8. In a hip that is Graf type IIc/stable dysplastic, the PH should be worn 24 hours/day for the duration of treatment.
9. In a hip that is Graf type IIc/stable dysplastic, the PH should be transitioned to night-time use near the end of treatment.

Dislocatable (Barlow positive) Hip

1. PH treatment is indicated for a hip that is dislocatable (Barlow positive).
2. A hip that is dislocatable (Barlow positive) should start PH treatment in the first week of life.
3. A hip that is dislocatable (Barlow positive) should start PH treatment in the first seven weeks of life.
4. An ultrasound should be performed immediately after PH application to assess hip reduction status.
5. For a hip that is dislocatable (Barlow positive), hip progress should be monitored via clinical examination every 2-3 weeks.

6. For a hip that is dislocatable (Barlow positive), hip progress should be monitored via ultrasound every 2-3 weeks.
7. For a hip that is dislocatable (Barlow positive), a clinic visit should occur every 2-3 weeks to check and adjust the PH.
8. A hip that is dislocatable (Barlow positive) should be treated for 12 weeks.
9. In a hip that is dislocatable (Barlow positive), the PH should be worn 24 hours/day for the duration of treatment.
10. In a hip that is dislocatable (Barlow positive), the PH should be transitioned to night-time use near the end of treatment.

Dislocated and Reducible (Ortolani positive) Hip

1. PH treatment is indicated for a hip that is dislocated and reducible (Ortolani positive).
2. A hip that is dislocated and reducible (Ortolani positive) should start PH treatment in the first week of life.
3. A hip that is dislocated and reducible (Ortolani positive) should start PH treatment in the first seven weeks of life.
4. In a hip that is dislocated and reducible (Ortolani positive), a clinical examination should be performed immediately after PH application to assess hip reduction status.
5. In a hip that is dislocated and reducible (Ortolani positive), an ultrasound should be performed immediately after PH application to assess hip reduction status.
6. Following PH application, a hip that is dislocated and reducible (Ortolani positive) should be monitored weekly for reduction and stability via clinical examination.
7. Following PH application, a hip that is dislocated and reducible (Ortolani positive) should be monitored weekly for concentric reduction via ultrasound.
8. If reduction and stability, determined by clinical examination, of a dislocated and reducible (Ortolani positive) hip is not achieved within 3 weeks, PH treatment should be abandoned.
9. If concentric reduction, determined by ultrasound, of a dislocated and reducible (Ortolani positive) hip is not achieved within 3 weeks, PH treatment should be abandoned.
10. Once a dislocated and reducible (Ortolani positive) hip is reduced, hip progress should be monitored via clinical examination every 2-3 weeks.
11. Once a dislocated and reducible (Ortolani positive) hip is reduced, hip progress should be monitored via ultrasound every 2-3 weeks.
12. Once a dislocated and reducible (Ortolani positive) hip is reduced, a clinic visit should occur every 2-3 weeks to check and adjust the PH.
13. If reduction and stability, determined by clinical examination, of a dislocated and reducible (Ortolani positive) hip is achieved within 3 weeks, PH treatment should continue for an additional 12 weeks from the time of reduction.
14. If concentric reduction, determined by ultrasound, of a dislocated and reducible (Ortolani positive) hip is achieved within 3 weeks, PH treatment should continue for an additional 12 weeks from the time of reduction.
15. In a hip that is dislocated and reducible (Ortolani positive), the PH should be worn 24 hours/day for the duration of treatment.
16. In a hip that is dislocated and reducible (Ortolani positive), the PH should be transitioned to night-time use near the end of treatment.

Dislocated and Irreducible Hip

1. PH treatment is indicated for a hip that is dislocated and irreducible.
2. A hip that is dislocated and irreducible should start PH treatment in the first week of life.
3. A hip that is dislocated and irreducible should start PH treatment in the first seven weeks of life.
4. In a hip that is dislocated and irreducible, a clinical examination should be performed immediately after PH application to assess hip reduction status.
5. In a hip that is dislocated and irreducible, an ultrasound should be performed immediately after PH application to assess hip reduction status.
6. Following PH application, a hip that is dislocated and irreducible should be monitored weekly for reduction and stability via clinical examination.
7. Following PH application, a hip that is dislocated and irreducible should be monitored weekly via ultrasound.
8. If reduction and stability, determined by clinical examination, of a dislocated and irreducible hip is not achieved within 3 weeks, PH treatment should be abandoned.
9. If concentric reduction, determined by ultrasound, of a dislocated and irreducible hip is not achieved within 3 weeks, PH treatment should be abandoned.
10. Once a dislocated and irreducible hip is reduced, hip progress should be monitored via clinical examination every 2-3 weeks.
11. Once a dislocated and irreducible hip is reduced, hip progress should be monitored via ultrasound every 2-3 weeks.
12. Once a dislocated and irreducible hip is reduced, a clinic visit should occur every 2-3 weeks to check and adjust the PH.
13. If reduction and stability, determined by clinical examination, of a dislocated and irreducible hip is achieved within 3 weeks, PH treatment should continue for an additional 12 weeks from the time of reduction.
14. If concentric reduction, determined by ultrasound, of a dislocated and irreducible hip is achieved within 3 weeks, PH treatment should continue for an additional 12 weeks from the time of reduction.
15. In a hip that is dislocated and irreducible, the PH should be worn 24 hours/day for the duration of treatment.
16. In a hip that is dislocated and irreducible, the PH should be transitioned to night-time use near the end of treatment.

PH Application/Follow-Up

1. An orthopaedic surgeon should apply the PH at the start of treatment.
2. An orthopaedic surgeon should check that the PH is applied correctly at the start of treatment.
3. An orthopaedic surgeon should check that the PH is applied correctly at each clinic visit.
4. An orthopaedic surgeon should perform all follow-up ultrasounds.

Complications

1. If femoral nerve palsy occurs, the position of the PH should be adjusted.
2. If femoral nerve palsy occurs, PH treatment should be temporarily discontinued until return of nerve function and then reinstated.
3. If femoral nerve palsy occurs, PH treatment should be abandoned.

Treatment Conclusion

1. At the conclusion of PH treatment, hips should be analyzed via ultrasound to assess for normality.
2. At the conclusion of PH treatment, hips should be analyzed via AP radiograph to assess for normality.
3. The maximum length of PH treatment is 20 weeks.

RAW DATA