Juvenile pubic symphysiodesis

Aldo Vezzoni
Med. Vet., Dipl. ECVS, Clinica Veterinaria Vezzoni, Cremona, Italy

In our clinical study recently published (VCOT 3/2008), while JPS caused always a better result than the conservative management, it was clinically effective in arresting or limiting development of CHD mainly in puppies presenting slight or moderate signs of susceptibility to CHD during their clinical and radiographic examination at the age of 12-22 weeks. JPS was clinically little or not effective in puppies with more severe initial signs of CHD and moreover was not indicated for puppies that showed no sign of susceptibility to CHD. Thereafter JPS appeared to be a surgical procedure capable of reversing or arresting the evolution of CHD in selected cases. In the selection of good candidates for JPS a very early evaluation of at-risk breed puppies is necessary: between the 14th and 16th week for medium-large breeds and between the 18th and 20th week for giant breeds. The owners should be informed about early CHD evaluation at the time of the first vaccinations. Early evaluation carried out with methodical examination of the hip joints can identify puppies that could benefit from this surgical technique. Comparing dogs treated with JPS and dogs with the same susceptibility signs to canine hip dysplasia (CHD) managed conservatively, we found a variable but constant improvement of the hip conditions that could benefit from this surgical technique. Comparing dogs treated with JPS and dogs with the same susceptibility signs to canine hip dysplasia (CHD) managed conservatively, we found a variable but constant improvement of the hip conditions that could benefit from this surgical technique.

In the group of puppies treated conservatively we observed how slight signs of susceptibility to CHD at the age of 12-16 weeks may frequently evolve into irreversible worsening, also due to environmental conditions, indicating a constant progression of the pathology. The Table shows the results which, in general, from a practical point of view, might be expected from the JPS surgical procedure in puppies of 12-22 weeks, drawn up on the basis of the preliminary physical and radiographic evaluation and of the results in terms of efficacy obtained in this study. By excellent prognosis we intend a reversal of the pathology with normalisation of joint development; by good to fair prognosis we intend arrest of the dysplastic process, not involution but the avoidance of severe progression. Patients showing values such as to warrant a poor to unfavourable prognosis are unlikely to benefit fully from this surgical procedure and only a limitation of the OA progression could be expected. Should it be carried out with these high risk patients, post-operation management must be carried out as rigorously as possible and the possibility of a negative outcome must be envisaged, including subsequent need for further surgical treatments. So JPS should not be carried out indiscriminately in all puppies subject to early diagnosis: neither cases with an over advanced form of CHD nor cases with normal coxofemoral joints will benefit from this kind of treatment. Proper and attentive handling of the puppy in the post-operative period also plays an important role in the success of JPS. From the ethical point of view – since JPS is significantly efficacious only in the mild to moderate forms of CHD and since these Grades of CHD are usually tolerated by the dog – it may be objected that this operation is unnecessary. The truth is that although a dog can well tolerate mild or moderate CHD it would certainly enjoy greater functionality and well-being with a normal or near normal joint condition, and also meet its owner’s expectations of an active life without limitations. Preventive treatment of mild and moderate forms of CHD with JPS seems further justified by the fact that these Grades of CHD in particularly active and heavy dogs may easily evolve into severer forms, with a progression of coxarthrosis such as to bring about a diminution of functionality, chronic pain and the need for more invasive surgery. JPS is a surgical procedure aimed at modifying the phenotype of the dog and – unlike other techniques such as TPO, acetabuloplasty or hip prostheses – does not always leave evident radiographic signs of its execution, even if a careful evaluation of the pubis and the pelvis shape could at least lead to a suspicion. This fact carries an important ethical implication: puppies successfully treated with JPS may as adults appear absolutely normal when officially tested for CHD and therefore could be used for reproductive selection, through ignorance or bad faith, in spite of their affected genotype. Moreover, females treated with JPS may undergo such narrowing of the pelvic girdle as to impede natural birth. These aspects must be discussed in depth with the puppies’ owners to make them aware of the problem and to obtain fully informed consent regarding contraindication for future use of these patients for breeding purposes. In this study several dogs (14 females) were, with the owner’s consent, spayed during the JPS operation.
A. Vezzoni

Prognosis Ortolani AR AS Center FH DI DARA
excellent Positive 15° - 25° 0° - 5° lateral < 1 mm 0.4 – 0.6 7° - 10°
Good to fair Positive 26° - 35° 6° - 10° lateral 1-2 mm 0.61 – 0.75 11° - 12°
Poor to unfavourable Positive 36° - 45° 11° - 15° lateral > 2 mm > 0.75 > 12°


Prognosis for JPS correlated to the clinical and radiographic findings of early evaluation in puppies 14-22 weeks old.

FURTHER READINGS ON JPS