

Clinical investigation on Equine Dystocia in Iraq

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Abstract

This study was performed on 22 crossed mares suffered from dystocia during the period from 1996-2012, their ages ranged from 4-8 years in two regions of Baghdad province include the department of surgery and obstetrics\ Collage of Vet. Med.\ University of Baghdad and Vet. Clinic in Abu-Ghriab. The mares were divided randomly into 4 groups according to the type of treatments, while the decisions of treatment were according to careful examination of fetus and dam. 62.5% of cases were successfully relieved by Cesarean section (C.S), 71.4% success was achieved by correction and traction, 50% by hormonal treatment and 33.3% by Fetotomy. Details concerning number of cases to C.S, indications, positive response, number of foals recovered, number of Male / Female and survival rate of foals were recorded. It was concluded that C.S and correction and traction were the best final treatment of dystocia in spite of the reasonable results obtained from various treatments, while the Fetotomy was undesirable treatments in mares.

التحري السريري عن حالات عسر الولادة في الخيول في العراق

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الخلاصة

أجريت الدراسة على 22 فرس مضرية كانت تعاني من حالة عسر الولادة خلال الفترة من 1996-2012، وتراوحت أعمارها من 4-8 سنوات في منطقتين من محافظة بغداد تضمنت الحالات الواردة إلى فرع الجراحة والتوليد البيطري/ كلية الطب البيطري/ جامعة بغداد والعيادة البيطرية في أبو غريب. قسمت هذه الحيوانات عشوائياً إلى أربعة مجاميع وفقاً لنوع العلاج المستخدم بينما كان قرار العلاج طبقاً للفحص الدقيق لحالة الجنين والأم. تم شفاء 62.5% من الحالات بنجاح من خلال إجراء العملية القيصرية بينما 71.4% من الحالات شفيت من خلال علاجها بالتعديل والسحب بالمناورات التوليدية فيما عولجت 50% من الحالات وتم نجاحها بالعلاج الهرموني، وكانت الحالات المعالجة بالتقطيع وسجلت نجاحاً لا تتجاوز 33.3%. تم البحث في التفاصيل التي تتضمن عدد الحالات وموجبات إجرائها في العملية القيصرية مع ذكر نسبة الاستجابة، وعدد الامهار التي ولدت بإحدى الطرق العلاجية المستخدمة إضافة إلى جنس وحيوية الامهار الالدة. نستنتج من هذه الدراسة ان العملية القيصرية وعملية التعديل والسحب سجلت أفضلية عن باقي الطرق الأخرى في علاج حالات عسر الولادة بالرغم من كون نسب الاستجابة في العلاجات الأخرى كانت مقبولة، بينما كان اللجوء إلى تقطيع الجنين علاجاً غير مرغوب فيه في الافراس.

Introduction

Dystocia is a critical condition which needs an emergency intervention and in such cases prognosis is usually unpredictable for dam and fetus (1, 2, and 3). Dystocia is one of the few true emergencies that equine practioners encounter, where a delay of several minutes can make differences of life or death to the foal (4, 5). Many authors reported that the dystocia occurs in about 4% of thorough bred and about 10% of draught horse birth (6, 7). Several etiological factors have been reported by several authors (8, 9, 10 and 11) that dystocia might be due to fetal mal disposition factors. This study was conducted to investigate the most common causes of equine dystocia in Iraq and the best reliable methods of treatments.

Materials and Methods

This study was conducted on 22 clinical cases of crossed mares suffering from dystocia during the period from 1996-2012, their ages range from 4-8 years in two regions of Baghdad province include the department of surgery and obstetrics\ Collage of Vet. Med.\ Baghdad University and Vet. Clinic in Abu-Ghriab. The mares were divided randomly into 4 groups according to the type of treatments, while the decision of treatment was made after careful examination of fetus and dam. Treatments were arranged in the following order:

- Correction and traction: Seven cases of fetal mal disposition were subjected to different steps mutation corrected fetuses were tracted with or without obstetrical tools.
- Fetotomy: Three cases of dead fetus were subject to Fetotomy according to Miline and Horny (12), using modified Thieygesen's fetotome.
- Hormonal treatment: Four cases of incomplete cervical dilation were treated hormonally by using oxytocine (Intertocine-Intervet-Holland) (100 IU/IM) in one dose.
- Cesarean Section (C.S): Eight cases of dystocia listed in table -2- were subjected to C.S as indicative treatment.

Oblique lower left flank approach was chosen as site of operation (12, 13), this site was prepared and anaesthetized locally by infiltrating 40-50 ml of 2% xylocaine (Lidocaine BP 2%\ London UK), 6-8 peccaries (Utocyl, CiBA-GEIGY) were placed in the uterine lumen after fetal expulsion then followed the use of a continuous lock: stitch suture through the wall thickness of the uterine wall, from serosa to endometrial surface according to Vanderplasse (14), then recovered mares were given 40-50 IU oxytocine I/M and penicillin-streptomycin (Combikel 20+20\ Belgium) 25ml I/M for five days. The number of responsive mares, efficiency of treatments, viability and sex of newborn were recorded. Statistical analysis includes Chi- square.

Results

The results were summarized in Table 1, 2 and 3. Five cases out of seven 71.4% were corrected and delivered by traction while the partial Fetotomy was the other alternative treatment applied to treat dystocia in cases which had lost their fetal fluids. Although I achieved 33.3% response after treating one case from three cases with this technique. Response of hormonal treatment in cases of insufficient cervical dilatation was limited to 50% (2 from 4 cases) since the majority of cases were associated with uterine inertia as a result of prolonged straining and muscular fatigue. Success rate of C.S was 62.5% (5 from 8 cases), this result is the best when compared with other treatment methods (Fetotomy and Hormonal), while in our study we recorded a significant differences ($P < 0.01$) between different methods of treatments (C.S recorded higher significant differences ($P < 0.01$) compared with other treatments. Table (3) shows that 22 foals were removed by different methods. The alive foals were 13 (59.09%) and dead foals 9 (40.91%) from the total born foals. But the sex of offspring were 14 (63.6%) male and 8 (36.4%) represented female.

Table (1) Efficiency of various treatments in Iraqi mares

groups	Type of treatment	No of animals	Response	Efficiency
1	Correction and Traction	7	5	71.4% a
2	Fetotomy	3	1	33.3% b
3	Hormonal	4	2	50% c
4	C.S	8	5	62.5% a
total	-	22	13/22	59.09%

•different litters mean significant differences ($P < 0.01$).

••similar litters mean no significant differences.

Table (2) Indications and Efficiency of C.S

Groups	Indications of C.S.	No of cases	Response	Efficiency
1	Abnormal P.P.P.	3	2	66.6% a
2	Vaginal prolapsed	2	1	50% b
3	Fetal over size	3	2	66.6% a
Total	-	8	5/8	62.5%

•different litters mean significant differences (P<0.01)

••similar litters mean no significant differences.

Table (3) Shows the details concerning foals delivered by different type of treatment

Groups	Type of treatment	No of foals	Sex		Viability	
			Male	Female	Alive	Dead
1	Correction & Traction	7	4	3	5	2
2	Fetotomy	3	2	1	---	3
3	Hormonal	4	3	1	3	1
4	C.S	8	5	3	5	3
total	-	22	14 63.6%	8 36.4%	13 59%	9 41%

Discussion

The all over response was 59.09% (13/22), but this response cases were different according to the type of treatment, it recorded 71.4%, 33.3%, 50.0% and 62.5% for correction and traction, Fetotomy, Hormonal and C.S. respectively showed a higher significant differences (P<0.01) for the correction and traction and C.S. these results as compared with Fetotomy and hormonal treatment were in agreement with others (2, 4 and 7). Although correction and reasonable traction is primary technique used to relieve dystocia but its failure may lead to further complication (3, 15 and 16), but the response was 71.4%. Partial Fetotomy was the other alternative treatment applied to treat dystocia in cases which had lost their fetal fluid but I achieved 33.3% (1/3) response after treating with this technique as well as it was an exhausting unsafe method for the mare and the veterinarian. This results agreed with other (3, 10 and 11), (Table 1). The response of hormonal treatment in cases of insufficient cervical dilatation was limited to 50% (2/4) since the majority of cases were simultaneously associated with uterine atony as a result of prolonged labour and muscular fatigue (15 and 16). (Table 1). Success rate of C.S. was 62.5% this result is the best among other treatment and agreed with findings of Embertson (4), Stashak (6), Watkins (7) and Juzwiak (8). 66.6% (2/3) of cases subjected to C.S. were abnormal presentation, position and posture (Ab.P.P.P.) and oversized fetus, while the vaginal prolapse recorded 50% (1/2) (1, 2, 3 and 10), (Table 2). Table 3 showed that 22 of foals were removed by different methods of treatments of dystocia. 14 (63.6%) foal of which were males and 13 (59%) were alive, while 8 (36.4%) were females and 9 (41%) were dead. The majority of cases which did not responded to treatment, either died during the course of treatment or soon after and the remaining low. Cases had developed various degrees of complications such as endometritis, pyometra or vaginitis or wound infection in cases of C.S. and this results agreement with (3, 4, 6 and 7). It was concluded for this study that the correction and traction the most reliable methods for treatment of equine dystocia although the C.S. was the 2nd choice.

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