

How to use this review

The information in the Handbook of Vacuum Delivery In Obstetric Practice 3rd ed (HBVD) has been divided into sections that refer to specific subject headings in the book. Within each section there are questions or exercises related to a specific topic which, when completed, provide a comprehensive review of the knowledge and skills that are essential for vacuum delivery. In addition, each task is accompanied by page numbers or figure and table references in the handbook that deal with the particular topic e.g.

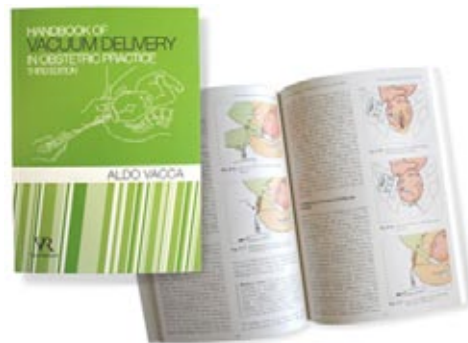
How may subgaleal haemorrhage associated with vacuum delivery be avoided?

Page & figure ref: 83, 99-100, 109, 111, Table 9.1

What do you understand by the term: flexion point? Why is the flexion point important in vacuum delivery?

Page & figure ref: 17-18, 26, 2.13a-b

Reference Resources:



HBVD: Handbook of Vacuum Delivery in Obstetric Practice – 3rd edition

The following resources are also available online at www.vaccaresearch.com through the link Clinician's Resources:

- ESSENTIAL PRE-READING FOR MASTERCLASS IN VAD.pdf
- HANDOUT- Prerequisites and Technique.pdf
- GENERAL KNOWLEDGE MCQ.pdf
- CASE STUDY.pdf
- HANDBOOK REVIEW QUESTIONS.pdf
- THE HISTORY OF VACUUM EXTRACTION –By Professor Tom Baskett.pdf
- A POEM ABOUT VAD –'It's always more posterior than you think'.pdf
- CHOICES WITH CHILDBIRTH GUIDE.pdf

Mechanism of labour

1. What mechanical factors combine to make the fetus progress through the birth canal?
Page & figure ref: 12
2. Describe the cardinal movements the fetal head undergoes while completing its passage through the birth canal.
Page & figure ref: 12, 2.3a-2.3f
3. How does shape of the fetal head influence progress of labour?
Page & figure ref: 12, 2.2, 2.12
4. What role do attitude and position of the fetal head play in the mechanism of labour?
Page & figure ref: 12, 2.2,2.4-2.7
5. What do you understand by the terms: axis of the pelvis and midpoint of the fetal head?
Page & figure ref: 28, 2.34a-2.34e

Correct application of the vacuum cup

1. What do you understand by the term: flexion point? Why is the flexion point important in vacuum delivery?
Page & figure ref: 17-18, 26, 2.13a-b
2. What do you understand by the term: mid point of the head? Why is the mid point important in vacuum delivery?
Page & figure ref: 22, 28, 2.25 & 2.26
3. How does the site of the flexion point in the birth canal alter with changes in fetal head position and attitude?
Page & figure ref: 18, 2.17-2.19, 2.20, 2.21-2.24
4. Describe the technique used to determine the location of the flexion point and the cup insertion distance.
Page & figure ref: 17, 19, 2.13a-2.13b, 2.14a-2.14b
5. Describe the correct (ideal) vacuum cup application. What term is used to describe it?
Page & figure ref: 22, 2.27
6. Why is it important to achieve a flexing median application of the vacuum cup?
Page & figure ref: 24, 2.29

7. Which vacuum cup applications are considered to be incorrect? What terms are used to describe them?
Page & figure ref: 22, 2.28
8. How can the operator confirm that the vacuum cup is correctly positioned on the fetal scalp?
Page & figure ref: 22, 2.27

Which vacuum extractor cup?

1. Classify vacuum cups according to: (a) the material from which they are made and (b) the basic design features of the cup.
Page & figure ref: 1-6, 26, Table 1.1, Table 2.1
2. Describe the characteristic design features of (a) soft anterior cups, (b) Malmstrom & Bird-type anterior cups, and (d) posterior cups.
Page & figure ref: (a) 6, 1.17-1.23 (b) 1-5, 1.1, 1.4, 1.6, 1.8 (c) 2-5, 4, 1.5, 1.7, 1.9, 1.10
3. What factors determine a vacuum cup's manoeuvrability within the birth canal?
Page & figure ref: 24, 2.30a-d, 2.31a-d, 2.32a-c, 2.33a-c
4. What principal design feature restricts manoeuvrability of soft and rigid anterior cups?
Page & figure ref: 24, 2.31a-d
5. What design feature makes posterior cups the most manoeuvrable of all vacuum cups?
Page & figure ref: 26, 2.32a-c, 2.33a-c
6. What factors help you select the most appropriate vacuum cups for use in specific clinical situations?
Page & figure ref: 26, Table 2.1
7. Which cups are most appropriate for: low OA (<45° rotated); low OA (>45° rotated); low OP/OT; mid OA; Mid OP/OT
Page & figure ref: 26, Table 2.1

Indications & contraindications

1. Compile a list of clinical indications for vacuum extraction and classify them into low and high risk categories (for your level of training and experience with vacuum delivery).
Page & figure ref: 31, Table 3.1, Table 3.1
2. List the clinical circumstances that in your opinion are contraindications for vacuum delivery.

Page & figure ref: 32, Table 3.1

3. How does the operator's level of experience alter the relative risk classification of the clinical indication for the procedure.

Page & figure ref: 40, 109, 110, Table 3.5

Assessment of feto-pelvic relationships

1. What do you understand by: station, level and engagement of the fetal head? How are they assessed in clinical practice?

Page & figure ref: 35, 36, 3.1, Table 3.2

2. What do you understand by: mid cavity vacuum delivery, low vacuum delivery, outlet vacuum delivery?

Page & figure ref: 36, 3.1, Table 3.3

3. What do you understand by: position and attitude (flexion, deflexion, asynclitism) of the fetal head? Describe how you assess them in clinical practice?

Page & figure ref: 14, 2.4-2.7

4. Describe a practical method for assessing degree of moulding of the fetal head

Page & figure ref: 38, 3.2

5. What clinical signs may suggest the presence of cephalopelvic disproportion?

Page & figure ref: 38, Table 3.4

Selection of patients for vacuum extraction

1. Describe the recommended classification of vacuum deliveries according to the station and degree of rotation of the fetal head.

Page & figure ref: 36, Table 3.3, Table 3.5

2. When do you consider the second stage of labour to be prolonged?

Page & figure ref: 34

3. Is there a place for vacuum delivery before complete dilatation of the cervix?

Page & figure ref: 33, Table 3.1

4. Why does "maternal exhaustion" increase the risks of vacuum delivery for the mother and infant? What measures can you take to reduce these risks?

Page & figure ref: 33, 111, Table 9.1

5. How does the clinical state of the fetus influence the decision whether vacuum extraction is appropriate or not?
Page & figure ref: 33, 111, Table 3.5, Table 9.1
6. Describe the steps you would follow to acquire the clinical information necessary for the selection of patients suitable for vacuum extraction.
Page & figure ref: 40
7. List the primary and associated obstetric selection variables
Page & figure ref: 33, Table 3.4
8. How do you evaluate the clinical information to decide whether vacuum extraction is appropriate in the given obstetric circumstances?
Page & figure ref: 40, Table 3.5

Vacuum delivery procedure - general

1. Describe the five procedural steps common to all types of vacuum delivery.
Page & figure ref: 49-55
2. How should you modify vacuum extraction technique if the mother has received epidural analgesia?
Page & figure ref: 43, 84, 111
3. What levels of negative pressure are recommended for vacuum delivery?
Page & figure ref: 9, Table 1.2
4. Describe the procedure for achieving the required negative pressure levels for soft anterior, rigid anterior and posterior cups.
Page & figure ref: 50, 58, 62, 69
5. What are the benefits (if any) for the fetus of releasing or reducing the vacuum pressure between contractions and describe the evidence upon which this practice is based?
Page & figure ref: 50

Vacuum delivery procedure - traction

1. What are the important traction principles for vacuum delivery?
Page & figure ref: 28, 51, 70, 5.4
2. How is axis traction achieved during vacuum extraction?
Page & figure ref: 51, 70, 2.34a-2.34d

3. Describe what is meant by the terms finger-tip and finger-thumb traction technique
Page & figure ref: 51, 5.4, 5.5, 5.6
4. List three functions of the pulling hand and six functions of the non-pulling hand during vacuum extraction
Page & figure ref: 51, 52, 5.4
5. At what station in the pelvis is the highest resistance to delivery usually encountered.
Page & figure ref: 84, 87, 7.2
6. What do you understand by the terms Descent phase and Pelvic floor & perineal phase of a vacuum delivery
Page & figure ref: 84, 88, 7.1a, 7.1b, 7.2

Vacuum delivery procedure - auto-rotation

1. How effective is the vacuum extractor for achieving auto-rotation of the fetal head from OP and OT positions?
Page & figure ref: 78, 80
2. How may the success rate of vacuum rotational procedures be improved?
Page & figure ref: 78, 80, 2.29, 6.25-6.27

Vacuum delivery procedure - detachment and failure

1. How can you prevent sudden detachment (pop off) of the vacuum cup?
Page & figure ref: 84, 7.1a, 7.3, 7.4a
2. Why should you prevent sudden detachment (pop off) of the vacuum cup?
Page & figure ref: 84, 86,99, 100, 8.2a, 8.3a, 8.10
3. What clinical or technical factors are likely to be involved when vacuum extraction is difficult or unsuccessful?
Page & figure ref: 83, 84, 2.34a-e, 2.35, 7.3
4. When would you consider that vacuum extraction has failed?
Page & figure ref: 86-89, 99, 112
5. How would you proceed to deliver the baby if vacuum extraction is unsuccessful?
Page & figure ref: 84, 86, 88, 99, 101,105, 116

6. Vacuum extraction or forceps delivery?
Page & figure ref: 90, 105

Vacuum delivery procedure - specific cup types

1. Describe the technique using a soft cup for non-rotational (OA) vacuum delivery
Page & figure ref: 57, 6.1b-g, 6.2a-f, 6.3a-f
2. Describe the technique using a rigid Malmstrom-design or Bird-design rigid anterior cup for non-rotational (OA) vacuum delivery
Page & figure ref: 62, 6.4a-f, 6.5a-f, 6.6a-f
3. Describe the technique using a posterior cup for rotational (OP or OT) vacuum delivery
Page & figure ref: 67, 6.8a-l, 6.9a-l, 6.10a-j

Maternal effects of vacuum extraction

1. What benefits have been claimed for the mother from vacuum extraction compared to forceps delivery?
Page & figure ref: 91, 105, 107
2. What disadvantages have been reported for the mother from vacuum delivery?
Page & figure ref: 34, 107
3. What predisposing factors have been identified for serious injury to the genital tract following vacuum extraction?
Page & figure ref: 83, 105, Tables 7.1 & 7.2
4. What is the place of episiotomy during vacuum assisted delivery?
Page & figure ref: 91, 104, 7.2
5. Is there evidence to suggest which type of episiotomy, midline or mediolateral, is preferable for vacuum delivery?
Page & figure ref: 104, 105

Neonatal effects of vacuum extraction

1. Of what clinical significance are cup marking ('bruising') and artificial caput (chignon) for the infant and for the mother?
Page & figure ref: 96, 107, 8.1a-8.1b

2. Of what clinical significance are scalp abrasion and cephalhaematoma for the infant?
Page & figure ref: 96, 98, 8.2a, 8.3a, 8.3b, 8.4
3. How may scalp abrasions be prevented?
Page & figure ref: 84, 86, 96, 7.3, 7.4a-7.4b
4. What are the predisposing circumstances for subgaleal haemorrhage associated with vacuum assisted delivery?
Page & figure ref: 83, 99-100, 8.7, 8.10
5. How may subgaleal haemorrhage associated with vacuum delivery be avoided?
Page & figure ref: 83, 99-100, 109, 111, Table 9.1
6. How may the serious clinical effects of subgaleal haemorrhage on the infant be reduced or prevented?
Page & figure ref: 86, 88, 100, 111, Table 9.1
7. How may cranial injury and intracranial haemorrhage associated with vacuum extraction be avoided?
Page & figure ref: 38, 83, 101, 111, Table 3.5
8. Is phototherapy for neonatal jaundice more common after vacuum extraction than after forceps delivery?
Page & figure ref: 102
9. What correlation is there between vacuum extraction and shoulder dystocia?
Page & figure ref: 102

Safety measures for vacuum extraction

1. What measures can be adopted prior to, during and after vacuum extraction to improve the outcome and safety of the procedure?
Page & figure ref: 111, 112, 125, Tables 3.3, 3.5, Table 9.1
2. How can you prevent mortality and reduce neonatal morbidity from vacuum delivery?
Page & figure ref: 100, 109, 111
3. After every vacuum delivery, what information should be recorded about the procedure?
Page & figure ref: 54, Table 5.1
4. What are the prerequisites for achieving competence in the use of the vacuum extractor?
Page & figure ref: 109, 110

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