

## Webinar : Antenatal Corticosteroids - Science

Slide No.	Text matter to be spoken	Remarks
1.	In this Webinar we will learn about the Rational use of Antenatal Corticosteroids	
2.	<p>Before we talk of ANS let us also have a look at the major problems these preterm infants face.</p> <ul style="list-style-type: none"> <li>• Respiratory Distress Syndrome (RDS)</li> <li>• Increased susceptibility to infections</li> <li>• Intraventricular hemorrhage</li> <li>• Necrotizing enterocolitis</li> <li>• Patent ductus arteriosus</li> <li>• Bronchopulmonary dysplasia</li> </ul> <p>Of these RDS, IVH, NEC, PDA and infections have been known to be reduced either in incidence or severity by use of ANS.</p>	
3.	<p>Antenatal Corticosteroids(ACS) have following effects:</p> <ol style="list-style-type: none"> <li>1. There is almost 45% reduction in RDS</li> <li>2. 46% reduction in Intra Ventricular Haemorrhage ☒</li> <li>3. 54% reduction in Necrotising enterocolitis and ☒</li> <li>4. 31% reduction in mortality</li> </ol>	
4.	The current recommendation for our country is to give a Single course of injection of Dexamethasone to be administered to women with preterm labour (between 24 and 34 weeks of gestation) at all levels of health facilities in the public as well as the private sector.	
5.	<ul style="list-style-type: none"> <li>▪ <b>As per the current recommendations administration of Antenatal Corticosteroid (Dexamethasone) constitutes an integral part of standard treatment in preterm labour irrespective of place of delivery.</b></li> <li>▪ <b>Oral Preparations of steroids are not to be used</b></li> <li>▪ <b>Repeated courses/more frequent doses are not useful.</b></li> <li>▪ <b>Multiple courses in fact could have harmful neuro-developmental effects in the baby</b></li> <li>▪ <b>ANCs have a role even if surfactant replacement is available</b></li> </ul>	
6.	<ul style="list-style-type: none"> <li>▪ <b>The preparation made available by the Government of</b></li> </ul>	

	<b>India is Injection Dexamethasone sodium phosphate available in the strength as 4mg/mL as a 5 mL vial.</b>																			
7.	<table border="1"> <thead> <tr> <th colspan="2">Injection Dexamethasone</th> </tr> </thead> <tbody> <tr> <td>Dose</td> <td>6 mg each</td> </tr> <tr> <td>No. of Injections</td> <td>4</td> </tr> <tr> <td>Interval between injections</td> <td>12 hours</td> </tr> <tr> <td>Route of administration</td> <td>Deep Intramuscular</td> </tr> <tr> <td>Site of administration</td> <td>Preferably antero lateral aspect of thigh</td> </tr> <tr> <td>Complete course</td> <td>Four doses (equivalent to 24 mg total)</td> </tr> <tr> <td>Logistics</td> <td>2 ml disposable syringes and 22/23 gauge needles</td> </tr> <tr> <td>Storage</td> <td>No need to refrigerate</td> </tr> </tbody> </table>	Injection Dexamethasone		Dose	6 mg each	No. of Injections	4	Interval between injections	12 hours	Route of administration	Deep Intramuscular	Site of administration	Preferably antero lateral aspect of thigh	Complete course	Four doses (equivalent to 24 mg total)	Logistics	2 ml disposable syringes and 22/23 gauge needles	Storage	No need to refrigerate	
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8.	<p>Indications of ANS are</p> <ul style="list-style-type: none"> <li>• All women at high risk of preterm delivery between 24 and 34 weeks of gestation who are in <b>true preterm labour</b>.</li> </ul> <p><b>In addition, in the following conditions that lead to imminent delivery antenatal steroids should be administered:</b></p> <ul style="list-style-type: none"> <li>• <b>Antepartum haemorrhage</b></li> <li>• <b>Preterm premature rupture of membrane</b></li> <li>• <b>Severe pre-eclampsia</b></li> </ul>																			
9.	<ul style="list-style-type: none"> <li>• We also need to know which women should not receive ANS as it may be detrimental to the women or her fetus. Clinical chorioamnionitis as evidenced by</li> <li>• <b>History of fever and lower abdominal pain and</b></li> <li>• <b>On maternal examination there is Foul smelling vaginal discharge, tachycardia and uterine tenderness along with Fetal tachycardia</b></li> </ul> <p>is a contraindication to use of ANS.</p>																			
10.	<ul style="list-style-type: none"> <li>• Premature rupture of the membranes, Pre-eclampsia, Hypertension and Diabetes are NOT contraindications to ANS use. In all these situations the Obstetrician needs to monitor the pregnant woman's blood sugar and blood pressure more meticulously after administration of ANS.</li> </ul>																			
11.	<ul style="list-style-type: none"> <li>• Antenatal Corticosteroid therapy has maximal effect if the fetus is delivered 24 hours after the last dose and up to 7 days thereafter</li> </ul>																			
12.	<ul style="list-style-type: none"> <li>• <b>So to summarise we learnt that Antenatal steroids</b></li> </ul>																			

	<p><b>induce lung maturity in preterm fetus.</b></p> <ul style="list-style-type: none"><li>• <b>A single course of ANS can reduce neonatal morbidities including mortality to a significant extent.</b></li><li>• <b>Dexamethasone is the drug of choice for administration to women with preterm labour between 24-34 weeks of gestation.</b></li></ul>	
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