Management Of Infants Born To Hepatitis B Surface Antigen Positive Mothers

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Background and Aims: Transmission of Hepatitis B virus (HBV) during delivery is the most frequent method of vertical transmission. Although immunoprophylaxis within 24 hours of birth is 95% efficacious in preventing perinatal transmission, it remains the most common route of hepatitis B spread in endemic areas¹.

A retrospective service evaluation was carried out to evaluate the management of infants at risk of perinatal transmission of HBV.

Methodology: From Jan 2004 to Jan 2018, records were reviewed of all infants tested for HBV and/or those with maternal hepatitis alert in either antenatal or perinatal notes. A total of 32 cases met the above criteria.

Results: Most of the cases were born at full term to mothers with low degree of hepatitis B infectivity (Chart 1). Full compliance was observed with giving the first dose of hepatitis B vaccine within 24 hours of birth (32 cases; 100%), administering hepatitis B immunoglobulins (Chart 2) in patients with high degree of maternal infectivity (5 cases; 100%) and effective communication regarding hepatitis B vaccination schedule to the GP (32 cases; 100%).

75% (24) of the patients received the full course of Hep B vaccination as per protocol (Chart 3) and had their hepatitis B status assessed (Chart 4) at ~15 months of age. 22/24 Patients (92%) were deemed immune (Chart 5). The remainder of the patients were re-vaccinated. None of them acquired HBV perinatally.

Conclusion: Perinatal transmission of HBV is preventable largely through accelerated hepatitis B vaccination. More recently, Hepatitis B vaccination has been incorporated in United Kingdom (UK) immunisation schedule (Table 1). Collaborative efforts and effective communication between the obstetrician, paediatrician and general practitioner is the key to ensure appropriate management and risk reduction in vertical transmission of hepatitis B virus.

References:

1. <http://www.who.int/mediacentre/factsheets/fs204/en/>

Charts 1: Degree of Maternal Infectivity

Chart 2: Babies requiring Hep B immunoglobulin

Chart 3: Hepatitis B vaccination as per schedule

Chart 4: HBsAb tested at 15 months of age (N = 32)

Chart 5: Outcome of HbsAb result (N = 24)

Table 1: UK immunisation schedule during infancy

The routine immunisation schedule				from Autumn 2018
Age due	Diseases protected against	Vaccine given and trade name	Usual site	
Eight weeks old	Diphtheria, tetanus, pertussis (whooping cough), polio, Haemophilus influenzae type b (Hib) and hepatitis B	DTaP/IPV/Hib/HepB	Infanrix hexa	Thigh
	Pneumococcal (13 serotypes)	Pneumococcal conjugate vaccine (PCV)	Prevenar 13	Thigh
	Meningococcal group B (MenB)	MenB	Bexsero	Left thigh
	Rotavirus gastroenteritis	Rotavirus	Rotarix	By mouth
Twelve weeks old	Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B	DTaP/IPV/Hib/HepB	Infanrix hexa	Thigh
	Rotavirus	Rotavirus	Rotarix	By mouth
Sixteen weeks old	Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B	DTaP/IPV/Hib/HepB	Infanrix hexa	Thigh
	Pneumococcal (13 serotypes)	PCV	Prevenar 13	Thigh
	MenB	MenB	Bexsero	Left thigh