

PREGNANCY AT SEA – 24TH WEEK OF GESTATION IS THE LIMIT

EILIF DAHL¹

Earlier this year I was part of a medical team that delivered a full-term baby on a cruise ship [1]. It went well and was in all respects a joyous event. But afterward we were all thinking: ‘What if....’ - because the potential for disaster was substantial: There had been no prenatal care, fetal monitoring during delivery was not possible, and surgical intervention could not be done if anything had gone wrong. Cruise companies are in the transport and entertainment business, not in the health business. Their vessels are not floating hospitals, and the medical facilities aboard can not be compared with modern shore-side hospitals [2].

There is no international body that regulates medical care on cruise ships. Filling a need, the American College of Emergency Physicians (ACEP) published in 1996 ‘Guidelines of Care for Cruise Ship Medical facilities’. It states that the cruise ships’ medical facilities are there to provide emergency medical care for passengers and crew,

¹ From: Norwegian Centre for Maritime Medicine, Haukeland University Hospital, Bergen; Institute of Internal Medicine, University of Bergen, Bergen; and Department of Surgery, Rikshospitalet University Hospital, Oslo, Norway
Corresponding address:
Professor Eilif Dahl, MD, MHA, PhD,
Department of Surgery, Rikshospitalet University Hospital, 0027 Oslo, Norway;
phone: (+47) 23 07 00 00; fax: (+47) 22 56 31 12; e-mail: eilifdahl@hotmail.com

stabilize patients and initiate reasonable diagnostic and therapeutic intervention and facilitate the evacuation of seriously ill or injured patients when necessary [3]. As an adjunct ACEP's Section for Cruise Ship and Maritime Medicine submitted a Policy and Educational Paper (PREP) [4]. The regularly updated PREP has become an international reference for practice of cruise medicine and is supported by Cruise Lines International Association, Inc. (CLIA), a non-profit trade association comprising 24 cruise lines that represent 97 percent of the cruise capacity marketed from North America [5]. The PREP covers medical facilities, staff qualifications, equipment, medication, procedures, basic laboratory and X-ray capabilities, a health, hygiene and safety program for medical personnel, and a process 'whereby passengers prior to embarkation are requested to provide information regarding medical needs that may require medical care on board'. However, pregnancy is not mentioned in the PREP [4].

Complications at any time during pregnancy, in particular miscarriages and ectopic pregnancies, are always more dramatic at sea and therefore dreaded by the medical staff, especially on cruises to remote areas where shore-side medical facilities and blood transfusions are not available [6].

An expert panel of medical cruise representatives supported by CLIA discussed in 2006 pregnancy and traveling children. It was suggested *that passengers and crew should be prohibited from sailing if they will have entered the 24th week (or later) of pregnancy at any time during the cruise*. The main reason was that medical facilities available on cruise ships are not suitable for, neither are ship's doctors expected to be trained in, neonatal care [4]. Moreover, a septic work-up on a febrile infant require pediatric equipment beyond the capability of cruise ships. Therefore, most representatives also felt that *children should not be permitted to sail prior to 12 weeks of age on the first day of cruise*. However, they found it reasonable that certain lines may extend this minimum age based on other risks (e.g. longer, or more remote cruise itineraries) where appropriate back-up facilities are deemed inaccessible.

Furthermore, there are good medico-legal reasons for a 24th gestation week pregnancy time limit. Before last trimester the fetus can not be considered viable outside the uterus without specialist intervention [7]. Data from Vermont Oxford Network 2005 suggest that mortality by gestational age < 23 weeks is 94% and <24 weeks 70% when the neonate is born in a hospital with and immediately transferred to a level 3 neonatal intensive care unit. Mortality is 30% higher if the neonate is born outside a tertiary center [8]. In other words, a neonate born before 24 weeks on a cruise ship can hardly be expected to live.

In addition, if a person is hospitalized ashore for pregnancy complications, she may not be able to get home. Some airlines require health certificates from all passengers traveling beyond their seventh month of pregnancy [9]. She will need a certificate from

a physician stating that it is safe for her to travel by air, and she might not be able to get that until well after delivery. It is usually considered safe to travel by air 1-2 weeks after uneventful vaginal delivery, but in case of complications air travel to get home may have to be indefinitely delayed [10]. Besides, as our case demonstrated, diplomatic complications may prolong repatriation if a baby is born in international waters on a vessel registered in a country different from the one where mother and child are urgently disembarked *post partum*. Lack of passport and visa for the child may make it very difficult to transit some countries, like USA, to get home [1].

Although most major cruise lines now adhere to the 24th week rule for pregnancy, it has been noticed that some companies have allowed pregnant passengers to cruise beyond that limit. Another expert panel meeting this autumn agreed that this rule should be followed by all cruise lines. However, because it takes a long time to replace cruise brochures already in circulation, some will state a different pregnancy cut-off date for some more time.

Increasingly sophisticated equipment and extensive training have made cruise ships one of the safest places to vacation in the travel industry [5]. Still, they are not for everyone, like pregnant women heading for the last trimester and children less than 6 months of age. The cruise line policies are often stated in small print in the brochures, so particularly port doctors and travel clinics should advise future travelers about these limits.

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