ABSTRACT. It is the intent of this statement to inform pediatric providers on the appropriate use of echocardiography. Although on-site consultation may be impossible, methods should be established to ensure timely review of echocardiograms by a pediatric cardiologist. With advances in data transmission, echocardiography information can be exchanged, in some cases eliminating the need for a costly patient transfer. By cooperating through training, education, and referral, complete and cost-effective echocardiographic services can be provided to all children.

Advances in echocardiography, including the introduction of Doppler and color flow mapping, have provided prompt, detailed, and noninvasive diagnoses of cardiac disorders. Although performance of echocardiographic studies in adults is fairly straightforward, the nearly infinite variety of cardiovascular abnormalities in the infant and child make similar studies in infants and children much more difficult to perform and interpret.

Although echocardiographic equipment is now available in nearly all communities in the United States, many areas do not have pediatric cardiologists. Additionally, many community hospitals can treat neonates with mild or moderate respiratory disease, but lack facilities and personnel to treat children with cardiac diseases. Transfer to a tertiary care center may be costly and disruptive to the family, but may be life-saving. The challenge is to bring the technology and expertise to the community hospital and to assure prompt transfer of the infant with life-threatening congenital heart disease but to avoid unnecessary transfers.

The American Academy of Pediatrics’ 1995 policy statement with regard to access to pediatric subspecialty services states that: “When the services of a physician specialist or other health care professional are needed by children, plans should use providers with appropriate pediatric training and expertise. Pediatric-trained medical and surgical specialists should have completed an appropriate fellowship in their area of expertise and be certified by subspecialty boards in a timely fashion if certification is available.” In virtually all parts of the country, pediatric cardiologists are available by telephone to help guide the application of diagnostic studies and to aid in their interpretation. Should congenital heart disease be indicated by echocardiographic findings, a physician specifically trained in pediatric cardiology should be consulted. In emergency situations, data can be exchanged by telephone or fax. Within a few hours’ time, videotapes can be delivered by courier. Telephone transmission of diagnostic images such as an echocardiogram can now be accomplished.

Interpretation of echocardiographic studies is highly dependent on appropriate and thorough collection of data by the ultrasound technologist. Although most community hospitals have sonographers skilled in performing echocardiographic studies in adults, these sonographers usually have little training or experience in performing studies in infants and children with serious congenital heart disease. Sonographers based in community hospitals face several logistical problems when placed in the position of needing further pediatric training and experience. These problems consist of time away from their community hospital, funding for training, and educational commitment from their community hospitals and from a training center. These problems can be solved if all involved parties (sonographer, community hospital, community-based pediatricians, and tertiary pediatric cardiology care centers) work together.

The American Academy of Pediatrics encourages all parties involved in providing pediatric cardiology care to establish linkages among themselves to ensure prompt, cost-effective administration of quality echocardiographic services.

REFERENCES


The recommendations in this statement do not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.
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