MEDICINE

MEDICAL STANDARDS FOR CHILD ABUSE PHOTOGRAPHIC DOCUMENTATION

—by Lawrence R. Ricci

Photographic documentation of significant findings is an important part of any child abuse evaluation, whether for physical or sexual abuse. The American Medical Association diagnostic and treatment guidelines for the abused child recommend that all visible lesions be photographed. Whether such documentation is relevant to a given case is a judicial decision. Photographs may have evidentiary value yet be deemed prejudicial to the defendant. Whether the probative value outweighs the prejudicial danger remains a decision the trial judge must make with each case. Photographs are generally considered admissible, however, if they shed light on the issue, enable a witness to better describe the objects portrayed, permit the jury to better understand the testimony, or corroborate testimony. Courts generally permit physicians to explain or illustrate their testimony with a photograph. High quality photographs of significant physical findings may be important in influencing courts to adjudicate that child abuse has taken place.

Although some institutions have access to professional photographic staff, either inside the institution via a media department or outside via law enforcement, many do not. It is incumbent upon physicians to ensure adequate photographic documentation of visible lesions either by taking the photographs themselves or by guaranteeing that they are taken by someone else. Pictures that are inadmissible because of technical error (out of focus, distorted, unidentifiable, too dark, etc.) must be avoided. The following discussion outlines critical principles of photographic documentation of child abuse cases. (More detailed reviews are noted in the accompanying bibliography.) These principles include good equipment, adequate lighting, and planned composition.

Equipment

The key equipment concerns are camera, lens, lighting, and film. A quality lens, adequate flash, and proper technique are of far greater importance than the brand of the camera. Decisions about what brand to acquire should be based on the needs of the photographer and the cost of the system.

Camera. 35mm slide and print photography remains the standard for patient documentation. Although new technologies are emerging, including videotape and computer based digital image manipulation, the cost of these systems probably far outweighs their benefits for most physicians. Similarly, while the utility of colposcopy for photographic documentation and for magnified examination of the sexually abused child is clear, such expensive equipment is not always required for adequate photographic documentation.

At the other end of the spectrum, instant processing cameras have the advantage of simple operation and low initial cost. Their disadvantages include poor resolution and poor color rendition when compared to 35mm cameras and film. This is particularly a problem when photgraphing subtle or faded

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bruises. Additionally, instant processing cameras have minimal close-up capability and require expensive film which is difficult to reproduce and store. The best argument for using an instant processing camera is that the print develops just after the photograph is taken, guaranteeing at least one form of documentation. One compromise, particularly when there is a need for immediate documentation, is to take both instant and 35mm photographs.

Specific 35mm camera types available include traditional 35mm single lens reflex (SLR) cameras, fixed-focus lens "point and shoot" cameras, and "bridge cameras—a new generation offering the simplicity of fixed focus lens and the versatility of a SLR. A traditional 35mm SLR is adequate for most physicians' needs, and offers requisite versatility not available in fixed-focus lens cameras.

Lens. The most versatile system for the relatively skilled photographer utilizes a traditional 35mm SLR camera body with a series of lenses, e.g., 50mm, 105mm, 35-105mm zoom, and macro lens. Attached to a 35mm camera, a macro lens or a standard lens with close-up adaptors allows photographs of fine anatomic detail otherwise not easily documented. The ideal lens for medical photography should have good optics, medium telephoto focal length to minimize distortion (85-105mm), and macro or close-up capability up to 1x (the image on the negative or transparency is magnified to life-size). A relatively inexpensive alternative to a macro lens for close-up work is a set of close-up or supplementary lenses. These are lens attachments placed over the normal lens to magnify the image. These auxiliary lenses provide magnification up to 0.5x. A colposcope mount may be useful for greater than life-size magnification particularly of the genitalia. The accessories may be used in various combinations depending on the particular clinical circumstances.

Lighting. Additional lighting should always be used when shooting indoors with daylight film. Three sources of studio lighting is the ideal arrangement, but expensive and sometimes difficult to manage. Short of that, an electronic flash offers the best light for indoor, color, medical photography. There are two basic types of electronic flash units, a traditional point source flash mounted to one side or the top of the camera (a "hotshoe"), and a ring flash which encircles the camera lens. A traditional hotshoe mounted flash is easiest to use. However, for close-up work such a flash may provide too much shadow. A ring flash mounted on the end of the lens provides shadowless, uniform illumination particularly useful for close-up photographs of cavities such as the rectum and vagina. Having both types of flash affords the greatest versatility.

Film. 35mm color slide film, sometimes called color transparency or color reversal film, remains the standard for medical use. Color film offers a distinct advantage over black and white in that color film uses the various hues of the subject to separate details much more effectively than shades of gray. Color slides are relatively inexpensive, quickly developed, easy to file, and can be converted into satisfactory color prints if necessary. Color slide film offers a distinct advantage over color print film by providing a first generation image that can be projected. It is important that the first generation image can be projected, because duplicating an image may significantly distort the color and resolution.

Because duplicating slides or prints may result in significant distortion of color and resolution, duplication should be avoided if at all possible. Rather, two or three sets of slides should be shot initially, i.e., each view

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should be photographed two or three times. One set can be used in court, while the others are retained with the child's record. Likewise, magnification should be accomplished in the original photograph by varying camera distance and/or by changing the lens, not in the print or slide making process. A standardized color bar, though awkward, may be placed in the photographic plane for comparison to the subject color. If color is a significant concern, as when trying to age a bruise, clinicians should always carefully document the coloring in writing, rather than rely on photographs, which may not always turn out.

As a rule, only one patient should be photographed on each roll of film. Even if a roll has only a few exposures it should be developed rather than kept in the camera where a mistake might either expose the film or confuse subjects. The use of a standard commercial processing laboratory for color film assures quality control, standardization, and legal acceptability.

Composition

Composition is the proper arrangement of the elements in a photograph. The compositional goal of medical photography is to accurately document the patient's condition. Artistic composition is not important: consistency of technique and reproducibility of results is important. A technically excellent photograph or series of photographs may not be admissible as evidence if they do not establish both the scale and the anatomic location of the trauma.

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not be used to enhance or exaggerate trauma. It is useful to photograph burns, abrasions, and children both before and after they have been cleaned. Lesions should be rephotographed as they change over time. photographing injuries from different angles and distances can add a three dimensional quality to photographic representation; photographs of the same child over and over again can add a fourth dimension.

The cooperation of the child is essential, both to minimize trauma to the child and to achieve the best composition. It is important to explain to children what is going to happen, in language they will understand. Allowing children to try out the camera and flash often aids in gaining their trust. Children should be allowed to assume a comfortable position. It is far better to have a cooperative child who is holding still, if somewhat out of optimal photographic position, than an uncooperative, restless child.

In order for photographs to be used as court evidence they must be properly verified and relevant to the issue. Verification requires that the photographer or physician testify that the pictures accurately portray the findings and be able to state how the photograph was taken. One way to help verify that the photographs taken are actually of a particular child is to take one picture of the child's name and another of the child's face. Likewise an identifying sign may be placed in front of the patient for each picture. But including such signs or labels with the patient's name and date in the photograph is time consuming and distracting. An alternative for identification of the film is the use of the camera dateback. Dateback attachments are available for many 35mm cameras which imprint the time, date, and an identifying code in each frame. Another advantage of a dateback is that since the imprint is always located in the bottom right of the transparency or negative right/left, top/bottom orientation is made simpler.

Disposition of photographs

After the film is developed, each image should be reviewed both for technique and content. No photographs, even poor ones, should be discarded. This could be misconstrued as destruction of evidence. Processed slides or prints should be reviewed and labeled. On the rim of each print or slide should be the name of the child, age, date of birth, date and time of photograph, hospital number, name of photographer, and name of physician. If confidentiality is a concern, each print or slide should, at a minimum, be labeled with a medical record number and the date the photographs were taken. The description, dimensions, and coloration of significant findings should be noted on each photo and/or on the original record.

The laws of a number of states address the issue of taking photographs in suspected cases of abuse. Indeed, many states require that reasonable efforts be made by the reporting hospital staff member to take or cause to be taken color photographs of any areas of visible trauma to the child. Many provide for immunity from civil or criminal prosecution for the institution reporting and the person arranging for or taking photographs if done in good faith.

Each institution should have a policy for both the handling and the release of the photographs. Though an unbroken chain of custody may be important in a criminal proceeding, in a civil case, where the photographer's testimony can verify that the photographs are representative of a particular subject, such a chain of custody may be less critical. For an unbroken chain of custody, film should change hands as infrequently as possible. With each transfer, the signature of an authorized recipient should be affixed to a list of the materials and should include date, time, and place. Outside lab processing may be acceptable, even if the lab does not sign for the film, if sending the film out is the normal business procedure for the institution. Courts usually accept films sent via first class mail to a standard commercial processing laboratory as an unbroken chain of custody. These laboratories will, upon request, enclose an affidavit ensuring the receipt, correct processing, and return of the film.

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Since photographs offer the only certain method of preserving often perishable visual findings, they may serve several useful purposes. Photographs can be reviewed after the examination to double check findings or perhaps even to discover previously unnoticed findings. If the magnification is precisely known, measurements can be obtained directly from the photograph. Photographic findings can be discussed among colleagues and consultants or can be compared to recent published data. The development of regional peer review groups to enhance technical and interpretive skills is to be encouraged. Photographs taken during an initial examination can provide a standard for subsequent comparison. Likewise, should a second opinion be required, photographs may save the child from the trauma of a repeat examination. In court, photographs can provide a powerful and convincing statement where a simple verbal description might fail. Even when not directly used in court, photographs serve to enhance testimony by jogging the examiner's memory of specific findings.

As important as corroborative physical evidence can be, many cases present without current physical evidence. Particularly whith the sexually abused child, a normal examination does not exclude the possibility of abuse. The need for a sensitive medical legal history continues to be paramount.

Summary

The following principles should be kept in mind when photographing abused children:

1. At least one if not several pictures should contain an anatomic landmark. The inclusion of an elbow or knee allows the viewer to identify the anatomic location of a wound. Anatomic or background material unnecessary to the photograph, however, should be left out.
2. At least two photos should be taken of each finding, one including identifying landmarks and one close-up with the lesion filling the frame. Magnification should be obtained in an original, not from a blowup.
3. To minimize distortion, the subject should be arranged in a manner that allows the surface of interest to be parallel to the film. Likewise, the photographer and the subject should be at the same level.
4. Varying perspective (taking a number of shots form different angles and distances) is quite useful, particularly since electronic flash may produce unpredictable reflections. Since the skin is a curved surface, some lesions may require several photographs to fully reveal the pathology.
5. The picture should be composed the way the examiner would normally look at that anatomic area.
6. Both color and size may be distorted in the photograph. Color should be documented if possible with a color scale within the photograph, and the size of lesions with a measuring device such as a metric ruler. Clearly written and detailed descriptionsof the dimension, shape, color, size, and location of the lesions are essential whether or not photographs are taken.
7. It is desirable but not always possible to have a standard set of views for each area

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of the body photographed. The four cardinal anatomic positions—AP, PA, right and left lateral—should be kept in mind when photographing children. However, young children may not cooperate with such positioning plans, reinforcing the usefulness of multiple views from varying perspectives.

8. Forensic bite mark photography is a specialized branch of medical photography and best left to a forensic dentist or pathologist. The basic objective of photographing bites is the accurate rendering of all aspects of the mark. Size, shape, color, depth of indentations and three-dimensional contours must be preserved. No one medium is suitable for all of these functions. Photographs, both black and white and color, can record the first three whereas dental impressions can show the last two. Ultimately, the photographs may be enlarged to life size and compared with a representation of the suspect's teeth.
9. Recording photographic data (date, time, location, case number, camera, lens, aperture, film, light, source, subject distance) helps reconstruct cases particularly for courtroom verification, aids learning and teaching, and encourages consistent technique if the child requires more photographs later.
10. Background is important. The background wall should be nonreflective, ideally a matte finish neutral gray, green, or blue. Glossy background surfaces can produce a glare. A cluttered room makes a poor background for medical photographs.
11. Before photographing children in clinical settings, it is important to establish both a protocol and a checklist for operation. Clearly identify who will take the photographs and how the film will be handled after picture taking.

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STATE CHAPTER NEWS

CHAPTERS TAKE OFF

Four more state chapters were chartered in December, 1991, and January, 1992 (Pennsylvania, Tennessee, Ohio, and Washington). These four bring the number of official APSAC state chapters to nine. The coordinators and interim officers of these newly-formed chapters are to be commended for their dedication and hard work. Getting a state chapter off the ground while you're working full time is no easy feat. (And Linda Lewin, coordinator and interim President of the Ohio chapter, is not only working full time, she's a mom, and is going to graduate school for a PhD in child development!)

Interim officers of the new chapters are as follow: **Pennsylvania:** Tom Curran, LCSW, JD; Christine Grant, RN, PhD; Carmen Anderson; Arlene Baxter, PhD; Rita Borzillo, JD. **Tennessee:** David Muram, MD; Bonnie Beneke, MSW; Kitty Oliver; Nancy Chandler, MSW; Tempie Dotson, MA. **Ohio:** Linda Lewin, RN, MS; David Gemmill, MD; Robert Reece, MD. **Washington:** Jon R. Conte, PhD; Paul Stern, JD; Mary Gibbons, MD; Florence Wolfe, MSW; Deborah Doane, MSW.

Other chapters are moving quickly to become chartered as well. Texas APSAC members met in Fort Worth in November and December to organize a chapter, and the interim Board will meet again in February to finalize a draft of the charter and begin organizing a slate of candidates for election to the Board. The next meeting of the general membership will be held in conjunction with a multidisciplinary, all-state conference to be held September 28-30 in Amarillo, sponsored by The Bridge.

The North Carolina chapter (one of the first to be chartered) has issued its first newsletter. Mailed to all APSAC members in the state, the newsletter is designed to stimulate statewide coalition building and provide local update information on the field. In addition, NCPSAC has dealt creatively with a problem faced by all chapters in big states (it takes 12 hours to drive east to west across North Carolina): how to be sure all areas of the states are represented and involved in state chapter activities. NCPSAC has organized chapter activities into nine regions which utilize the same boundaries as AHEC. Each region has two coordinators who will promote the development of NCPSAC within their region, and serve as contact people for prospective new members. This is a terrific way to make sure that everyone who wants to get involved at the state level can get involved.

CALL FOR NOMINATIONS

Nominations are being sought for the 1993 APSAC Awards. Awards will be given in the following categories:

Outstanding Service Award
This award recognizes a members who has made outstanding contributions to APSAC through leadership and service to the Society.

Outstanding Professional Award
This award honors a member of APSAC who has made outstanding contributions to the field of child maltreatment and to the advancement of APSAC's goals.

Research Career Achievement Award
This award recognizes an APSAC member who has made repeated, significant, and outstanding contributions to research on child maltreatment over his or her career.

Outstanding Media Coverage Award
This award recognizes a reporter or team of reporters in print or electronic media whose coverage of child abuse encidents or issues shows exceptional knowledge, insight, and sensitivity.

For information on how to nominate a colleague call the APSAC office at 312-554-0166. **Complete nominations must be received no later than May 31, 1992.**

SAVE THIS DATE

Monday, August 31, 1992, 5:30 p.m. In conjunction with the ISPCAN Ninth International Congress on Child Abuse and Neglect, to be held in Chicago, APSAC will hold an International Networking and Social Hour. APSAC members and their colleagues worldwide will have an opportunity to meet and discuss the professional concerns that unite us across oceans. It should be a stimulating couple of hours. We hope to see you there! (See page 23 for Conference information.)

REACH OUT

HELP APSAC STRETCH ITS ADVERTISING BUDGET!

You can be of vital service to APSAC by taking brochures and news about APSAC with you when you meet with other professionals in the field. We are delighted to send you as many brochures as you can use—just give us at least a week's advance notice. Do you know of any relevant newsletters that might publish a news brief about APSAC? For a supply of brochures or sample articles about APSAC, please call 312-554-0166 anytime.

Thanks to all of you who will call, and all who have called and helped spread the word about APSAC and its goals.