UP WITH SERVICE

Health care and the AMA

With the political intrigue of a Republican Convention and the pomp of a Midwestern high school graduation, the American Medical Association met in New York last week to install a new president and discuss once again ways of keeping the Federal Government out of its private life.

While members of the association's powerful House of Delegates convened in the Imperial Ballroom of the Americana to pass resolutions in defense of the financial security of the practicing physician, medical students and nurses picketed in front of the hotel, carrying signs that read, "Caution: The AMA may be hazardous to your health," and chanting, "Hip, hip Hippocrates. Up with service, down with fees."

At one point during the opening session, a group of protesters invaded the meeting, charging the AMA with being a reactionary outfit, dedicated to protecting the physician rather than the patient and consistently ignoring the poor. In a comment representative of the doctors' reaction, Dr. Wesley Hall, an AMA trustee from Reno, said afterwards, "This is ridiculous. When will these boys grow up?"

Later in the week, when the student protesters threatened a repeat performance, interrupting the inauguration ceremony if not allowed 10 minutes to speak, the house unanimously voted to call for the protection of the New York City police.

Thus guarded, the late afternoon ceremony went smoothly as scheduled when the protesters backed down to avoid bloodshed and broken heads. Guests assembled in the ballroom to the tune of "Aquarius," a song from the hit musical "Hair," followed by an invocation, hymns, introduction of all the members of the Board of Trustees and presidents of state medical societies and an address from the new president, Dr. Gerald D. Dorman.

Dr. Dorman, a New York physician who looks like everyone's family doctor, listed three measures the AMA could take to reach its goal of providing "the best possible health care to all our patients who need it."

First, he called for "a constantly advancing health care system," which involves recognition of the dynamic force of the profit motive. "A proper understanding of the necessity of the incentive system in health care," he said, "is paramount to everything in which the medical profession is involved."

The second requirement, he said, is "a widespread respect for the leadership and a widespread recognition of the contributions of the medical profession." Public esteem of organized medicine is dwindling in the face of soaring health bills, and the AMA role in keeping Dr. John Knowles, liberal director of the Massachusetts General Hospital, from the top health post in the Department of Health, Education and Welfare (SN: 7/12, p. 27), has also drawn criticism.

"Actually, we had nothing to do with blocking Dr. Knowles' appointment," Dr. Dorman said later. "Johnny Knowles is a fine doctor and we respect him and use him. He simply was not among the top four candidates we nominated for the job."

Dr. Dorman's third path to better health care was "enhanced functioning of the medical profession," to be brought about largely through improved communications between doctors, patients and Government.

During the week the House of Delegates passed some 130 resolutions directed toward achieving these objectives. One declared, "The provision of comprehensive health care to the poor is a desirable goal. It must have a thoroughly humane, sound and realistic approach and it must promise only what it can logically expect to deliver." Further, the resolution called for action rather than more study of the problem and favored the inclusion of inhabitants of poor neighborhoods on panels planning delivery of health care services. It was the first time the AMA so specifically named the poor as a special group.

In another move, the House of Delegates supported a bill introduced by Rep. Richard Fulton (D-Tenn.), which, if passed, would be the kiss of death to Medicaid, the Federal-state program providing medical aid to needy of all ages. It is aimed not only at abolishing Medicaid but also at preventing a national compulsory health insurance system applying to Americans of all ages. Under the AMA plan, health insurance premiums from private insurers would be paid as a credit against income tax, with the Government footing all or a portion of the premium bill applied on a graduated basis.

The house also passed a resolution calling for peer review committees within county medical societies that would examine physicians' charges to their patients. According to Dr. Ernest B. Howard, executive vice president of the AMA, this is really a move "to keep the Feds away from the door," because excessive bills under Medicare and Medicaid are currently under investigation by the Senate Finance Committee (SN: 5/24, p. 497).

Other resolutions:

- Deplored the Senate investigation.
- Favored Federal loans to medical students, an existing program formerly opposed by the AMA.
- Opposed Federal aid to transplant patients.
- Called for AMA investigation of the Food and Drug Administration's move to take from the market drugs marketed prior to 1962 that review panels of the National Academy of Sciences have found either unsafe or ineffective (SN: 7/5, p. 6).

Such action, the AMA believes, should not be taken without first consulting practicing physicians (such doctors were on the National Academy of Science panels). The AMA may move to introduce appropriate legislation in Congress.

In Michigan earlier this month, the Upjohn Company successfully challenged FDA's authority to remove certain drugs from the market without first demonstrating a clear threat to health. A circuit court enjoined against the agency's move to ban Panalba, a combination antibiotic product which brings in nearly $16 million a year. Panalba was criticized as ineffective in fixed combinations by the academy in its report to FDA, completing a two-year review of drug efficacy. The NAS study evaluated all the drugs which appeared on the market from 1938 to 1962. These total some 2,800 prescription and nonprescription drugs, many of which are condemned in the report as lacking medicinal merit and carrying misleading labeling.

BLOOD TEST

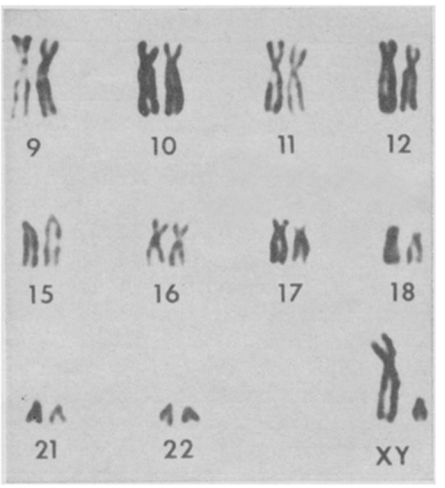
Big step in sex prediction

Not all prospective parents would like to know six months in advance the sex of their unborn child. Some still want to be surprised. But in families with a history of sex-linked diseases, obstetricians could make good use of a determination of sex early in the mother's pregnancy.

But the only method available to determine the sex of the fetus has been through analysis of cells from the mother's amniotic fluid (SN: 4/12, p. 355). This involves insertion of a needle into the patient's abdomen. Many problems can arise, such as puncturing a blood vessel, introducing infection or even encouraging the onset of premature labor.

Now a trio of physicians at the University of California Medical Center at San Francisco has successfully predicted that 19 unborn infants were male through a blood test made early in pregnancy. Obtaining the sample is a simple and routine procedure, although analyzing it is laborious.

Other research teams are working to computerize blood chromosome analysis, which could eventually automate the process for determining sex before birth.



UC Medical Center

Male chromosome (bottom) tells all.

The three—Dr. Melvin M. Grumbach, chairman of the Medical Center's Department of Pediatrics, Dr. Felix A. Conte, a UC fellow in pediatric endocrinology, and Dr. Janina Walknowska, a cell geneticist who recently returned to the University of Cracow in Poland after working at UC on a fellowship—originally set out to explore the reasons why a mother fails to reject the fetus.

The baby represents a foreign body in the uterus, so a mother must somehow build up a tolerance. On this premise the investigators started a painstaking analysis of the blood of pregnant women to find out why. As they studied chromosome structures of lymphocytes —a class of white blood cells—they detected a few containing XY chromosomes, normally found only in males.

Of the 21 women whose blood contained these male cells, 19 later gave birth to boys. Two or more cells containing XY chromosomes were found in 10 of the women and they all bore male babies.

"The two false-positive results were in women where only one cell with XY chromosomes was found," says Dr. Grumbach. These could have persisted from an earlier pregnancy, he says.

As a control test, 2,000 cells from five normal nonpregnant females were analyzed, and none revealed XY chromosomes.

The results strongly suggest that fetal cells pass through the placental membrane into the mother's bloodstream, reports Dr. Grumbach, putting aside the theory of a placental barrier used for many years to explain why a baby was not rejected. If the placenta were a barrier and no cells could pass to the mother, then immune rejection would certainly not occur.

Though red blood cells are sometimes known to leak through to a mother's bloodstream, this is the first time that lymphocytes have been detected.

The transfer of lymphocytes carrying histocompatibility antigens — antigens capable of being accepted—to the maternal blood may be an important factor in permitting the mother to tolerate the fetus, says Dr. Grumbach.

During the past one and a half years the UC researchers, whose work has been partly supported by grants from the National Institutes of Health (NIH), have tediously examined more than 13,000 lymphocytes from 30 women. Six of the nine women in whom no XY chromosomes were found gave birth to girls. In the three women with male infants the doctors lacked enough cells for reliable analysis.

"We started out the study thinking a cell count of 400 would be enough to find an XY cell, if it were present," explains Dr. Conte. "But we soon upped this number to 700 and then to 1,200. The three cases where mothers delivered a male and we had reported no XY chromosomes were among the first studies." The group now feels the study of 1,200 cells will give a 95 percent chance of finding at least two cells with XY chromosomes.

Sex determination through samples of a pregnant woman's blood is direct in the case of male babies, and indirect, by a process of elimination, in the case of females. So far, predictions of males as early as 14 weeks after conception have proved correct.

While taking the blood sample from the woman is simple, the analysis is a different matter. It presently entails laborious examination of each cell. Computerization of chromosome analysis is essential if there is to be large-scale screening of cultures from pregnant women.

Teams at NIH, Yale and Atlanta, Ga., are working toward this goal, Dr. Grumbach says, but he has no forecast of when it will become a practicality or when application to sex determination could begin.

"From what I know of existing computerized medical processing, it should be fairly easy," says Dr. Conte. "The computer simply would scan the cell to distinguish the chromosomes by size. You have five small acrocentric chromosomes in the male and only four in the female.

"But then, of course, if you are going to go to the trouble of computer programming, you also want the program to tell you of cell abnormalities, such as an extra chromosome. The step that has to be taken—and hasn't been done yet—is to correlate abnormal cell findings or cell types with abnormal babies born. None of the group we studied had any abnormal births."

Finding an extra chromosome then might warrant taking a sample from the amniotic sac, which would give more cells to examine, he says.

BIOSAT

More vertebrates in space

The Biosatellite Program was established to study the effects of space on all types of life from its lowest to highest forms. Unlike the Manned Space Program, the Biosatellite venture has been riddled with failures. The most recent mishap came with the death of the astromonk Bonnie and termination of the planned 30-day Biosatellite 3 Project after only nine days (SN: 7/19, p. 96). The two prior space flights in the program carried plants and insects on three-day orbital voyages, but the first of these failed when a retro-rocket misfired. The second was successful.

The future of the Biosatellite Program was the subject of a meeting at Santa Cruz, Calif., of 40 space biologists. They will recommend heavier emphasis be placed on the study of man and vertebrates in space.

While a full report has not been drafted, the chairman of the meeting, Dr. Kenneth Thimann of the University of California at Santa Cruz, felt this would be one of the major decisions to come out of the conference. The two-week session, ending this week, was convened by the National Academy of Sciences at the request of the National Aeronautics and Space Administration. The group will make its formal report to the NAS in Washington next month, but its contents will not be made public until sometime in September, according to Dr. Thimann.

The scientists at the conference divided up to discuss the future of the program's five major areas of study: effects of space on biological rhythms; cells, plants and invertebrates in space; man and vertebrates in space; radiobiology, and animal orientation, direction finding and tracking.

"The group is looking at the program over the long range," says Dr. Thimann. "We are trying to determine in which areas there is an urgent need for more space work and where more ground work is needed first.

"I think the group will decide more space work is needed in the study of man and vertebrates along the lines of the Biosatellite 3 Project," Dr. Thimann predicts. "A similar decision will probably be made in the study of animal orientation, direction finding and tracking."

Dr. Thimann says there will probably be a call for additional work on the ground in cell and plant investigation, such as exposure to controlled environments and experience in a centrifuge to simulate weightlessness in space. He and other biologists have often said many ground studies can be just as fruitful as those in space.