THE COMPARISON OF BULLSEYE POLAR MAP WITH
SIDE BY SIDE DISPLAY IN LOCALIZING
INFARCTED AREA OF Tl-201 MYOCARDIAL
TOMOGRAPHY. S. Male, M. Okano, F. Ohnzu, Y. Eki, S. Yanagida, S. Katsushika, H. Yukitake,
National Defense Medical College, Saitama.

To determine the accuracy of the tomographic
thallium-201 imaging in localizing
infarcted area, exercise and normalized
stressed studies were evaluated quantitatively
in side by side display(SSD) and
bullseye polar map(BPM) in 10 patients(pts)
with chest pain with normal coronary angiograms(CP) and 20 pts with myocardial
infarction(MI). Normal standards were
established using 10 CP pts. The overall
sensitivity(st) and specificity(sp) of SSD
and BPM were: 91% and 68%(SSD), 64% and 84%
(BPM). Results of MI in localization with
SSD and BPM were:

<table>
<thead>
<tr>
<th>SSD</th>
<th>LAD</th>
<th>LCX</th>
<th>RCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>st(%)</td>
<td>100</td>
<td>67</td>
<td>100</td>
</tr>
<tr>
<td>sp(%)</td>
<td>67</td>
<td>91</td>
<td>59</td>
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</tbody>
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These results suggested that SSD could be
a sensitive technique for detecting the
presence of infarcted area and those using
BPM might be a specific but poorly
sensitive method for detection of
infarction.

EVALUATION OF CORONARY ARTERY DISEASE USING
BULLS EYE. F. Nakashi, T. Kasuga, Y. Sakai,
Shinshu University Hospital, Matsumoto.

Stress Tl-201 emission computed tomography
was performed for 24 patients with CAD
and 11 normal subjects. The overall
washout rate was

calculated from the stress and redistribution
Bull's eye images and evaluated by
comparison with the grade of stenosis on coro-
nary arteriogram.

Seventy seven percent of the coronary ar-
teries with spasm but without significant
stenosis and with moderate (50-70%)stenosis
were detected quantitatively by washout rate,
compared with 31% by visual method.

One hundred percent of the coronary arteries
with marked stenosis (more than 90%) were
detected by the visual method, compared with
55% quantitatively by washout rate.

We concluded that washout rate for evaluat-
ing stress-redistribution Tl-201 ECT is more
sensitive than the visual method, especially
in patients with moderate coronary stenosis
of one vessel and those with spasm.

EVALUATION OF MYOCARDIAL BLOOD FLOW IN A-C
BYPASS SURGERY AND PTCA. (USING EXERCISE
Tl-201 MYOCARDIAL SPECT AND BULL'S EYE
IMAGE). H. Naruse, M. Ohyanagi, H. Kawamoto,
Y. Todo, R. Fujisue, J. Tateishi, H. Ando,
N. Yasutomi, T. Iwasaki and M. Fukuchi.
Hyogo College of Medicine, Nishinomiya.

To evaluate the improvement of myocardial
blood flow after A-C bypass surgery and
percutaneous transluminal coronary
angioplasty (PTCA), we performed exercise
Tl-201 myocardial scintigraphy in 20
patients (32 vessels).

We determined the regions of interest
according to the area perfused by
operated coronary artery on 3-dimensional
map (so called Bull's eye image), and
evaluated the improvement of myocardial
blood flow using the stress image and
washout rate.

Myocardial perfusion in the 22 regions of
interest was improved in 26 regions perfused
by patent vessels, and that in the 4 regions
of interest was not improved in 6 regions
perfused by occluded vessels.

In 26 of 32 vessels (81%), evaluation by
postoperative coronary angiography is
consistent with that by scintigraphy. Thus,
exercise myocardial scintigraphy
was corresponding with postoperative myocardial
blood flow. And Bull's eye image was useful
because it is easy for the analysis compared
with circumferential profile analysis.

ASSESSMENT OF 99m-Tc-PYROPHOSPHATE (PYP)
AND 201-MYOCARDIAL SINGLE PHOTON EMISSION
COMPUTED TOMOGRAPHY (SPECT) SUPERIMPOSED
IMAGE IN PATIENTS WITH ACUTE MYOCARDIAL
INFARCTION (MI). Y. Kojima, K. Yoshioka, T.
Nakasato, S. Katsuragawa, T. Takenashi, T. Yanagi-
sawa, T. Ishikawa, M. Kato and K. Nakai.
Iwate Medical Univ., Morioka.

99m-Tc-PYP and 201-Tl myocardial SPECT
superimposed images were obtained in 10
cases with acute MI (containing 2 cases with
non-transmural MI). Tomographic imaging
was performed in each case at 3 to 13 days
after MI episode with a rotating gamma
camera (HITACHI-GAMMA-RCT) interfaced to a
dedicated nuclear computer system (HARP RP-
100). These images can provide accurate
differentiating informations in the cases
who have radioactivity in structures over-
laying the heart and residual radioactivity
in the cardiac blood pool. So we expect
that the sensitivity in detection of non-
transmural MI is increased. In addition,
it is possible to separate acute MI from
old MI clearly by this method.