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AMICICIDE AT SEA:

FRIENDLY FIRE INCIDENTS DURING WORLD WAR II

NAVAL OPERATIONS

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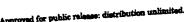ELECTE
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AMICICIDE AT SEA:

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SUMMARY

Problem

The problem of amicicide, or "friendly fire," is not new, and it is not limited to ground combat situations. If U.S. ships are hit by allied weaponry during combat operations the cost may be high both in human and in operational terms.

Objective

The present investigation examines amicicide incidents among U.S. ships during World War II. Operational scenarios and casualty frequencies are discussed.

Approach

Incidents in which U.S. ships were damaged or sunk by Allied weaponry during World War II were identified. Using publications of the Naval History Division, the incidents were classified by scenario and ship type. Frequencies of wounded-in-action (WIA) and killed-in-action (KIA) were compiled.

Results

There were 53 incidents of amicicide at sea during World War II, resulting in 438 WIA and 186 KIA. Forty of the incidents occurred in 1945. Amphibious operations accounted for 25 incidents, while only three occurred during naval battles. Destroyers were hit most often, accounting for 32 percent (n=17) of the incidents.

Conclusions

Amicicide incidents at sea continue to be a very real possibility. Measures to reduce the likelihood of friendly fire should be undertaken, and it is important that medical planning for such incidents is implemented.

2

AMICICIDE AT SEA:

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Operation Desert Storm highlighted the reality of "friendly fire" casualties as part of the overall numbers of wounded and killed during combat operations. The accidental nature of these incidents heightened rather than lessened public concern.[1,2,3]

A recent study[4] has proposed that casualties resulting from the actions of compatriots are mislabeled when they are called "friendly fire" or "fratricide," and the term "amicicide" has been suggested as an alternative which more appropriately describes a casualty caused by friendly forces. Amicicide is a battlefield fact of life,[3] and has occurred in every war; however, Desert Storm was unique in that technology brought the war home to the public as it was happening and allowed accurate assessment of the origin of the weapons inflicting damage.

Although Desert Storm was primarily an air and ground operation, future U.S. operations may well focus on the sea. While post-Desert Storm naval forces are not structured for open-sea warfare, there is a strong trend toward a U.S. Navy which is equipped for littoral and shallow-water operations, including amphibious operations.[5,6] If U.S. ships become victims of amicicide, the cost may be high in human, financial, and operational terms.

Although today's ships are equipped with the latest radar and electronic warfare equipment, there have been no recent

large-scale naval combat operations to fully test this technology. During Desert Storm, for example, with an overwhelming allied force and with virtually no naval opposition from the Iraqis, the battleship Missouri was nevertheless "raked by friendly fire,"[7] demonstrating that such incidents can and do happen despite high-tech equipment, air superiority, and an emphasis on ground operations.

With this in mind, an examination was made of incidents in which U.S. ships were damaged or sunk as a result of U.S. or Allied weaponry during World War II, the last major naval engagement. This historical perspective may promote better understanding of the nature of amicicide at sea and the circumstances surrounding it.

METHOD

The *Naval Chronology, World War II,*[8] prepared by the Naval History Division, lists the daily occurrences of sinking and damage to the vessels involved in World War II. The date, hull number and name of the vessel have been extracted for incidents involving damage to U.S. ships caused by American or Allied gunfire. Collisions, groundings, and other accidents were excluded from this analysis.

Historical narratives[9,10] were examined for anecdotal information concerning these incidents. The scenarios, including descriptive data such as type of engagement, amount of air and naval gunfire, enemy activities, and weather, for amicicides

among forces afloat were determined when possible. In addition, the type of duty, such as picket duty, screening, escort, or patrol, was ascertained. Previous research[11,12] examined the number of ships and casualties involved in various naval operations, which allowed the numbers of wounded-in-action (WIA) and killed-in-action to be determined for each incident.

RESULTS

Fifty-three amicicide incidents were found in which U.S. vessels were damaged or sunk by friendly fire. Of these, 32 percent (n=17) were destroyers, 11 percent (n=6) were PT boats, and nine percent (n=5) were LSTs. Other classes of damaged ships included battleships (n=3), aircraft carriers (n=4, including one small carrier), cruisers (one heavy cruiser and two light cruisers), submarines (n=2), mine sweepers (n=3), hospital ships (n=1), and various logistics vessels including cargo, transport and salvage ships.

As Table 1 shows, the number of amicicides increased with the intensity of World War II naval operations. Three incidents took place in 1942, two in 1943, eight in 1944, and a full 75 percent (n=40) of the occurrences happened in 1945. The Okinawa campaign alone accounted for 22 incidents, or 41.5 percent of the total for the entire war. The total casualties for the amicicides reported in the present investigation, as shown in Table 2, were 186 KIA and 438 WIA.

Table 1. *Ships hit by Allied gunfire during World War 2; Shiptype by Year*

SHIPTYPE	1942	1943	1944	1945	TOTAL
Destroyers	3	1	2	11	17
PT Boats	0	0	4	2	6
Landing Craft	0	0	0	6	6
Carriers	0	0	0	4	4
Battleships	0	0	0	3	3
Cruisers	0	0	0	3	3
Minesweepers	0	0	0	3	3
Submarines	0	0	2	0	2
Salvage Ships	0	1	0	1	2
Transports	0	0	0	2	2
Cargo Ships	0	0	0	2	2
Seaplane Tender	0	0	0	1	1
Hospital Ship	0	0	0	1	1
Patrol Craft	0	0	0	1	1
Total	3	2	8	40	53

Table 2. *Casualties on Ships hit by Allied gunfire during World War 2; Shiptype by Year*

SHIPTYPE	1942 WIA	1942 KIA	1943 WIA	1943 KIA	1944 WIA	1944 KIA	1945 WIA	1945 KIA	TOTAL WIA	TOTAL KIA
Carriers	0	0	0	0	0	0	115	16	115	16
Destroyers	8	5	0	0	21	3	80	10	109	18
Battleships	0	0	0	0	0	0	99	21	99	21
Submarines	0	0	0	0	0	83	0	0	0	83
PT Boats	0	0	0	0	23	22	0	4	23	26
Landing Craft	0	0	0	0	0	0	35	3	35	3
Salvage Ships	0	0	18	8	0	0	0	6	18	14
Cruisers	0	0	0	0	0	0	21	2	21	2
Transports	0	0	0	0	0	0	8	1	8	1
Patrol Craft	0	0	0	0	0	0	6	1	6	1
Minesweepers	0	0	0	0	0	0	3	1	3	1
Cargo Ships	0	0	0	0	0	0	1	0	1	0
Seaplane Tender	0	0	0	0	0	0	0	0	0	0
Hospital Ship	0	0	0	0	0	0	0	0	0	0
Total	8	5	18	8	44	108	368	65	438	186

Table 3 shows the tactical situations which resulted in amicicide incidents. Ships participating in assault/landing operations involving large numbers of craft, such as those in the Pacific Islands, were most vulnerable to amicicide and accounted for 25 incidents. Of these, 13 vessels involved in bombardment and screening were hit, while landing, logistic, and medical vessels accounted for 12 incidents. Attacks, raids and sorties generally were quick, aggressive operations mounted by carrier forces. These rapid attack situations resulted in nine

Table 3. Amicicide Incidents of World War II by Tactical Situation

AMPHIBIOUS LANDING AND ASSAULT OPERATIONS				
Tactical Situation	*No. of Amicicide Incidents*	*Types of Ships Hit*	*Total WIA*	*Total KIA*
Shore Bombardment	7	BB, CL, DD	108	22
Anti-Aircraft, Screening	6	DD	63	8
Troop Landings	6	LST, PCS	32	4
Logistics	5	AKA, APA, AV, LSD	13	0
Medical Support	1	AH	0	0

OTHER SCENARIOS				
Tactical Situation	*No. of Amicicide Incidents*	*Types of Ships Hit*	*Total WIA*	*Total KIA*
Attacks, Raids, Sorties	9	CA, CV, CVL, DD, SS	152	19
Patrol	6	PT	23	26
Logistics	4	APA, ARS, SS	23	98
Picket Duty	3	DD	7	1
Minesweeping	3	YMS	3	1
Naval Battle	3	DD	14	7

incidents. Six PT boats were hit by friendly fire while on patrol; four vessels engaged in logistics operations such as transport or repair were hit, as were three destroyers on picket duty and three vessels sweeping for mines. Great naval battles accounted for relatively few incidents; during Guadalcanal only two amicicide incidents were recorded, and the Battle of the Philippine Sea accounted for only one such incident.

DISCUSSION

Although the term "amicicide" is new, casualties which occur as a result of mistaken action by allies have always been a part of combat. Most of the attention to amicicide has focused on ground operations; however, over six hundred casualties were sustained on ships hit by "friendly fire" during World War II. As the post-Desert Storm Navy prepares to fulfill its duties as a forward presence, it is important to examine the historical occurrences of naval amicicide to ascertain whether similar scenarios are likely to be repeated in the future.

The most common scenario for naval amicicide during World War II was during landing operations. Okinawa, an amphibious landing which was for the most part unopposed, accounted for over forty percent of the incidents. With over two thousand ships participating, the scenario at Okinawa was crowded and smoky, with battleships bombarding the shore, destroyers screening the battleships, and landing craft approaching the shore under cover of gunfire. It was often a scene of confusion, with poor

visibility, in which ships fired over ships. The possibility
that some of the naval gunfire could go astray, in hindsight,
seems almost inevitable.

Mistaken identity was responsible for several of the
amicicides. For example, four PT boats were sunk by Allied
aircraft, at a cost of 22 KIA and 23 WIA, while they were on
patrol off the Bismarck archipelago.[10] In another incident, ARS
32 (Brant) was lost for duty when inadequate recognition signals
caused friendly naval forces to shell her while she was
performing salvage operations off the coast of Sicily. In this
incident, eight crew members were killed and 18 were wounded.[9]
The Seawolf, a submarine, was mistaken for an enemy vessel and
sunk while transporting stores and army personnel. The cost of
this error was 83 lives.[9]

The fifty-three incidents of amicicide reported herein
included only those which were caused by naval or air fire. A
high percentage of destroyers, PT boats, and LSTs became
casualties, first, because they accounted for a large proportion
of the fleet, and second, due to their tactical roles (i.e.,
screening, patrol, and landing). The price was high - 186 were
killed, 438 were wounded, and costly equipment was lost. In
addition, accidental collisions, misfiring of weapons, and
internal explosions also occurred.

The end of the Cold War and the downsizing of forces afloat
make combat operations involving vast numbers of ships
increasingly unlikely.[5,6] The future in all probability will not

see a war with the size and scope of World War II, but the possibility of naval amicicide will always be present when ships embark on combat operations. During the Korean Conflict, which is generally viewed as a ground war, the *Grapple* (ARS-7) was mistaken for an enemy vessel while on patrol. She was fired upon at close range, resulting in two KIA and 11 WIA.[9]

Improvements in equipment, particularly communications and identification devices, have reduced the likelihood that ships will fire on their allies in error. Radar has been in use for more than fifty years, but the advent of the digital computer along with vast improvements in data display screens and antennae, have revolutionized shipborne surveillance systems. Electronic support measures (ESM) passively intercept radar emissions to provide warning of threats and initiate countermeasures such as signal jamming. Electronic countermeasures (ECM) actively seek to disrupt enemy surveillance and to counter weapons. Electronic counter-countermeasures (ECCM) combat ECM systems by nullifying their jamming capabilities.

Identify, friend or foe (IFF) systems, or secondary surveillance radar, were first used in 1942[13]. This equipment sends a signal to "interrogate" its target, seeking a response which indicates that the target is friendly. An ongoing problem with IFF has been that of determining whether the lack of a response from a target indicates that it is hostile or whether it is friendly with non-operating equipment. As recently as 1992,

the *Saratoga* fired a Sparrow missile during NATO war games, hitting a Turkish destroyer.[14]

Given the rapid responses required in naval combat situations, amicicide incidents at sea are a very real possibility. In addition to electronic and radar technology to reduce the likelihood of such incidents, it is important to ensure that medical planning for such eventualities is undertaken.

REFERENCES

1. Schmitt E: War's 'friendly fire' toll spurs push for solutions. *New York Times*, 141 (Fri., June 5, 1992):A9(N).

2. Hackworth DH: Killed by their comrades (the problem of friendly fire). *Newsweek*, 188:21 (Nov. 18, 1991):45-46.

3. Hackworth DG: 'Friendly fire' casualties. *Marine Corps Gazette*, 76(3):46-48, 1992.

4. Goodman RC, Visco EP, Harding JJ, Richardson HD: Friendly fire. Presented at the Tenth International Symposium on Military Operations Research, 1993.

5. Kelso FB, Mundy CE, Jr.: Department of the Navy 1993 Posture Statement. Reprinted in *Marine Corps Gazette* 77(5):28-33, 1993.

6. Garrett HL: Department of the Navy 1992 Posture Statement. Reprinted in *Marine Corps Gazette*, 76(4):20-35, 1992.

7. van Voorst B: They didn't have to die (Desert Storm's casualties from friendly fire). *Time*, 138:8 (Aug. 26, 1991):20.

8.   Naval History Division, Office of the Chief of Naval
     Operations: *United States Naval Chronology, World War II.*
     Washington, D.C., 1955.

9.   Naval History Division, Office of the Chief of Naval
     Operations: *Dictionary of American Naval Fighting Ships,
     Vols. 1-8*, Washington, D.C., 1959 to 1981.

10. Bulkley RJ: *At Close Quarters: PT Boats in the United
     States Navy.* Naval History Division, Washington, D.C.,
     1962.

11. Blood CG: Analyses of battle casualties by weapon type
     aboard U.S. Navy warships. *Military Medicine*, 157(3), 1992.

12. Blood CG: Shipboard and ground casualty rates among Navy
     and Marine Corps personnel during World War II operations.
     Naval Health Research Center Report 90-16, 1990.

13. Blake B., Ed.: *Jane's Radar and Electronic Warfare Systems,
     Fifth Ed.* Jane's Information Group Ltd, Surrey, UK, 1993.

14. United States Congress: Accidental firing of a missile into
     the Turkish ship TCG Muavenet: hearing before the Committee
     on Armed Services, second session, October 5, 1992.
     Washington: U.S. G.P.O.: Supervisor of Documents, 1992.

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